SO ROOMY! SO LUXURIOUS!

Complete for $7500

The greatness of the Sea-Villa goes back to an ideal—the ideal conceived many years ago of giving to new thousands the pleasure of boating enjoyed by the few.

Thus was the Sea-Villa created, the unusual in cruisers. Compact, yet roomy. Luxurious, yet low priced. Great Lakes quality apparent in every detail of equipment. A complete home afloat, with accommodations for family and guests.

The Sea-Villa, illustrated below, is now on a six weeks' cruise of the Great Lakes. Chicago, Detroit, Erie, Cleveland and Buffalo will be visited, giving those who desire the privilege of riding in and examining this popular new boat. Make your appointment now for an inspection trip and see for yourself what a truly great achievement the Sea-Villa is.

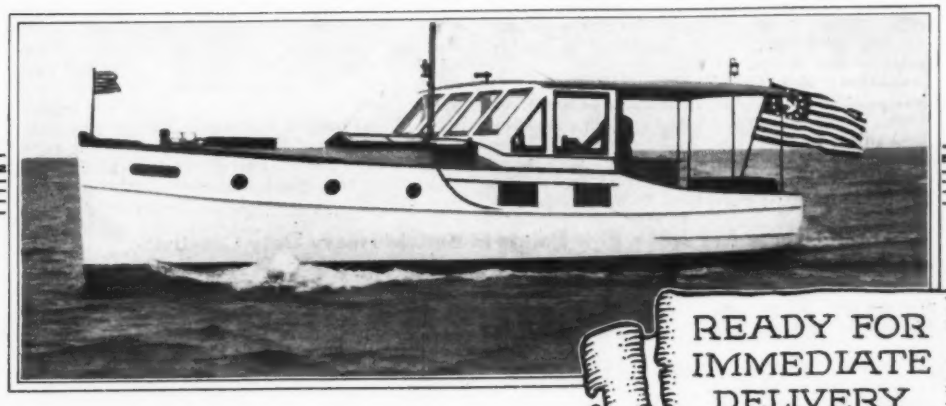
Inspection may also be made of the Sea-Villa Cruiser and Great Lakes Runabouts at Bayside, Long Island. Phone Port Washington 676 for appointment.

Great Lakes Boat Building Corporation
Milwaukee, Wisconsin

Branch Offices: Port Washington, L. I. · Buffalo · Miami Beach and Tampa, Florida · Seattle · Los Angeles · San Francisco

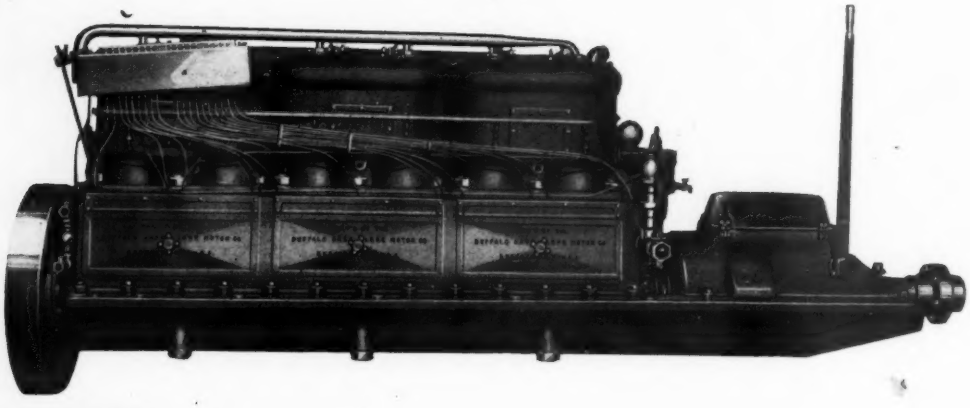
GREAT LAKES *Sea-Villa*

A 45 Footer in 36 Feet



READY FOR IMMEDIATE DELIVERY

MOTOR BOATING, June, 1925. Volume XXXV, No. 6. Published monthly at 119 West 40th Street, N. Y., U. S. A., by International Magazine Co., Inc. Yearly subscription price: United States, $3.00; Canada, $3.00; Foreign, $4.00. Entered as second-class matter April 15, 1909, at the Post Office at New York, N. Y., under the Act of March 3, 1879. (Printed in U. S. A.)



Why

Buffalo Heavy Duty Engines

Are Dependable

THE points which make Buffalo Heavy Duty Engines outstanding for reliable service cannot be told in detail—there are too many of them. It would mean going over every part and explaining why it is best for its particular work. Here are a few—there are a hundred others just as important:

Rocker Arm—The valves are operated by rocker arms which extend from the camshaft to opposite side of the crankchamber. Bearings in rocker arm panel are removable, four rocker arms being contained in each panel. These panels are so arranged that the inspection panels can be removed without disturbing them. The rocker arm has a movement on the bearing end of only 3/32 in. when valve is raised to its proper height.

Removable Camshaft—The camshaft is removable through the side of the crankcase.

Cylinder Water Panels—They are unusually large, making it easy to clean the water jackets—a big advantage when operating in muddy water or salt water.

Crankshaft Bearings—The bearing surface is unusually large, insuring long life, freedom from wear. Bearings are positively lubricated by mechanical oiler.

Connecting Rod Bearings—They are large, babbitt lined, brasses of the marine type. The bearings seldom, if ever, need to be renewed.

Crankcase Panel—The panels are unusually large, making the interior easily accessible. Steel stanchions tie the cylinders to the base and relieve the crankcase of strain.

Water Pump—It is a plunger pump with fulcrum located in the rear of plunger and secured there by a removable trunnion which gives very easy action and takes all wear from the plunger and the bore of the pump, thus giving a direct action.

Flywheel—The flywheel is mounted on the flanged crankshaft. No danger of coming loose—it is held in place by six bolts.

Reverse Gear—The clutch is of the internal expanding wing type, built for hard wear and easy adjustment. The gears revolve on hardened and ground pins of large diameter. Gears are bushed with liberal bronze bushings. The reverse band on the clutch is of the external contracting type, steel babbitt lined. This prevents grabbing and chattering and gives a smooth back-up action and long life.

These Are Just a Few Points in Buffalo Heavy Duty Construction—Buffalos Are Built for Service All the Way Through.

BUFFALO GASOLENE MOTOR CO.

1274-1286 Niagara Street, Buffalo, N. Y.

The Engine of Constant Service

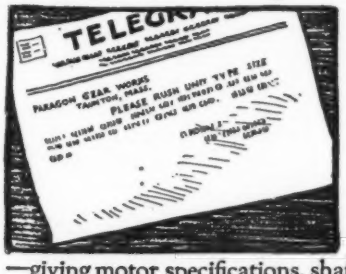
Advertising Index will be found on page 166

Here's a Comfortable Thought to keep aboard your boat!

FOR the same reason that you carry an anchor—security—something to fall back on—keep this thought handy this summer. Of course, you may go through the season without a breakdown—you may not be deprived of your boat for weeks because yards are too busy to handle the job—we hope you don't have a reverse gear failure—but just in case you do—

Send us a Telegram

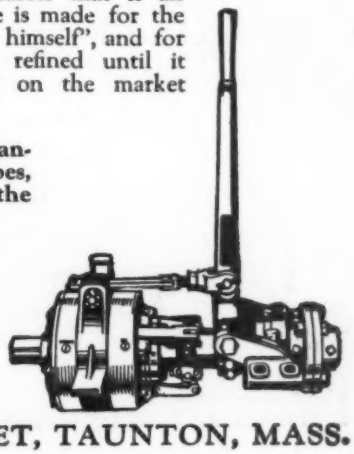
We build our Unit Type reverse gears in quantity production so that any one of five sizes are always in stock ready to ship at a moment's notice. Wire us, that is all—giving motor specifications, shaft dimensions and size of keyways and the new gear will go out by the next shipment to any part of the world. Then when you get it



Just Drop It In

Slip a coupling on the forward end, another to the shaft, and bolt down on extended rails. Those three simple operations—and your gear is in and you are on yourway. It cuts reverse gear installation down to no time at all. There is no delay to hold you up in the middle of a season that is all too short. The Unit Type is made for the man "who does the work himself", and for that reason it has been refined until it is the most simple gear on the market to install.

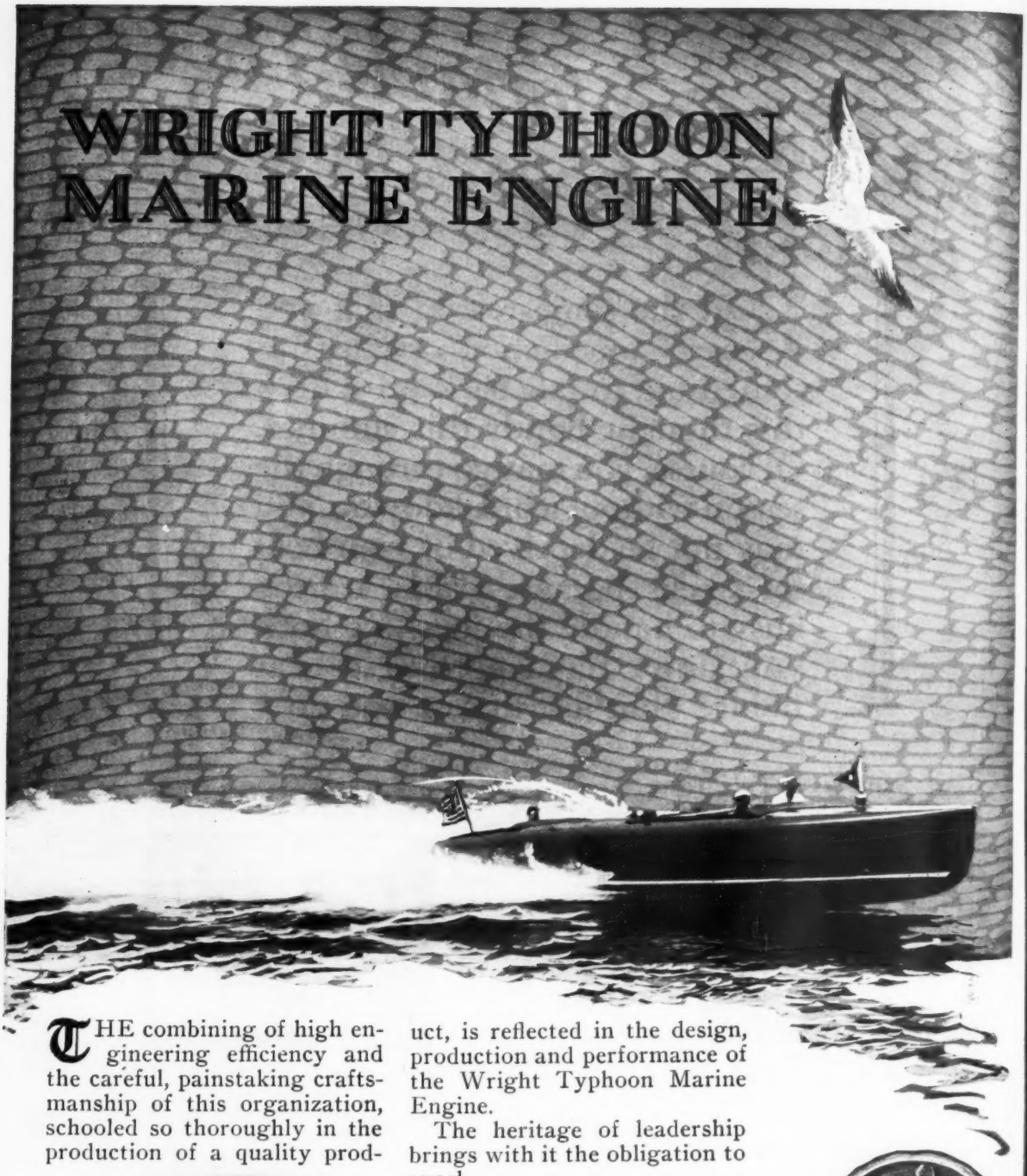
Remember this while you are boating this summer! Meanwhile write us for Bulletin 46 which gives dimensions, types, prices and tells which size will fit your motor so that the right gear can be ordered by wire.



PARAGON REVERSE GEARS

PARAGON GEAR WORKS - 105 CUSHMAN STREET, TAUNTON, MASS.

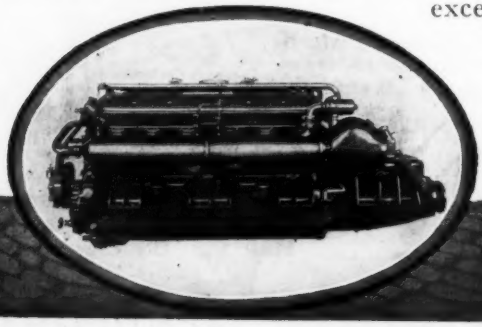
WRIGHT TYPHOON MARINE ENGINE



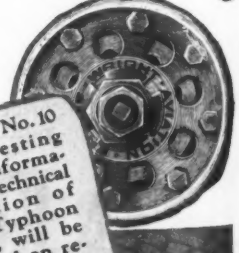
THE combining of high engineering efficiency and the careful, painstaking craftsmanship of this organization, schooled so thoroughly in the production of a quality product, is reflected in the design, production and performance of the Wright Typhoon Marine Engine.

The heritage of leadership brings with it the obligation to excel.

WRIGHT AERONAUTICAL CORPORATION
Paterson, N. J., U. S. A.



Wright Typhoon Marine Engine, 12 cylinder, 60 degree V Type, 600 H.P. Bore 5.75 in. stroke 6.25 in. 1947 cu. in. cylinder displacement. 600 H.P. at 2100 R.P.M. 550 H.P. at 1900 R.P.M. Weight 1860 lbs. Available for immediate delivery.



BULLETIN No. 10 with interesting general information and technical description of Wright Typhoon Engines, will be forwarded on request. Send for it.

Advertising Index will be found on page 166

SEPTEMBER 5th—7th

HARMSWORTH
INTERNATIONAL TROPHY

ANOTHER great race will be held again at Detroit. September the 5th to 7th is the date set for the Annual Regatta. The Main Sheet will again be the official program. It will be replete with articles and illustrations on racing, yachting personalities, yacht clubs, trophies and a very comprehensive program of entries and events.

Last year the Program number carried 80 pages of national advertising and was beautifully bound with a heavy 5 color cover. Numerous advertisers have already reserved space for this number because they recognize the quality message which this 15,000 circulation conveys.

Write or wire at once for space rates

The Main Sheet

3101 Woodward Avenue
DETROIT

Engine trouble—*use your flashlight!*

SUDDEN silence . . . spasmodic pops . . . a wheezing cough . . . she's dead! One of these nights when something goes wrong with the motor, you'll really appreciate having your Eveready Flashlight along. Its safe, bright light will help you quickly find the trouble and start the engine running again.

Eveready Flashlights take the risk from night-boating. They have countless uses. To look at the gas. To locate snags and bars. To pick safe landings.

The type illustrated is No. 2642, the Eveready 3-cell Focusing Searchlight with the 500-foot range. Handsome ribbon black-metal case. Safety-lock switch, proof against accidental lighting. Octagonal, non-rolling lens-ring.

Eveready Unit Cells fit and improve all makes of flashlights. They insure brighter light and longer battery life. Keep an extra set on hand. Especially designed Eveready-Mazda bulbs, the bright eyes of the flashlights, likewise last longer.

For the hundred-and-one uses every boatman has for safe, dependable, portable light. Use your flashlight! Improved models meet every need for light—indoors and out. There's a type for every purpose and purse, and an Eveready dealer nearby.

Manufactured and guaranteed by

NATIONAL CARBON COMPANY, INC.
New York San Francisco
Canadian National Carbon Co., Limited, Toronto, Ontario

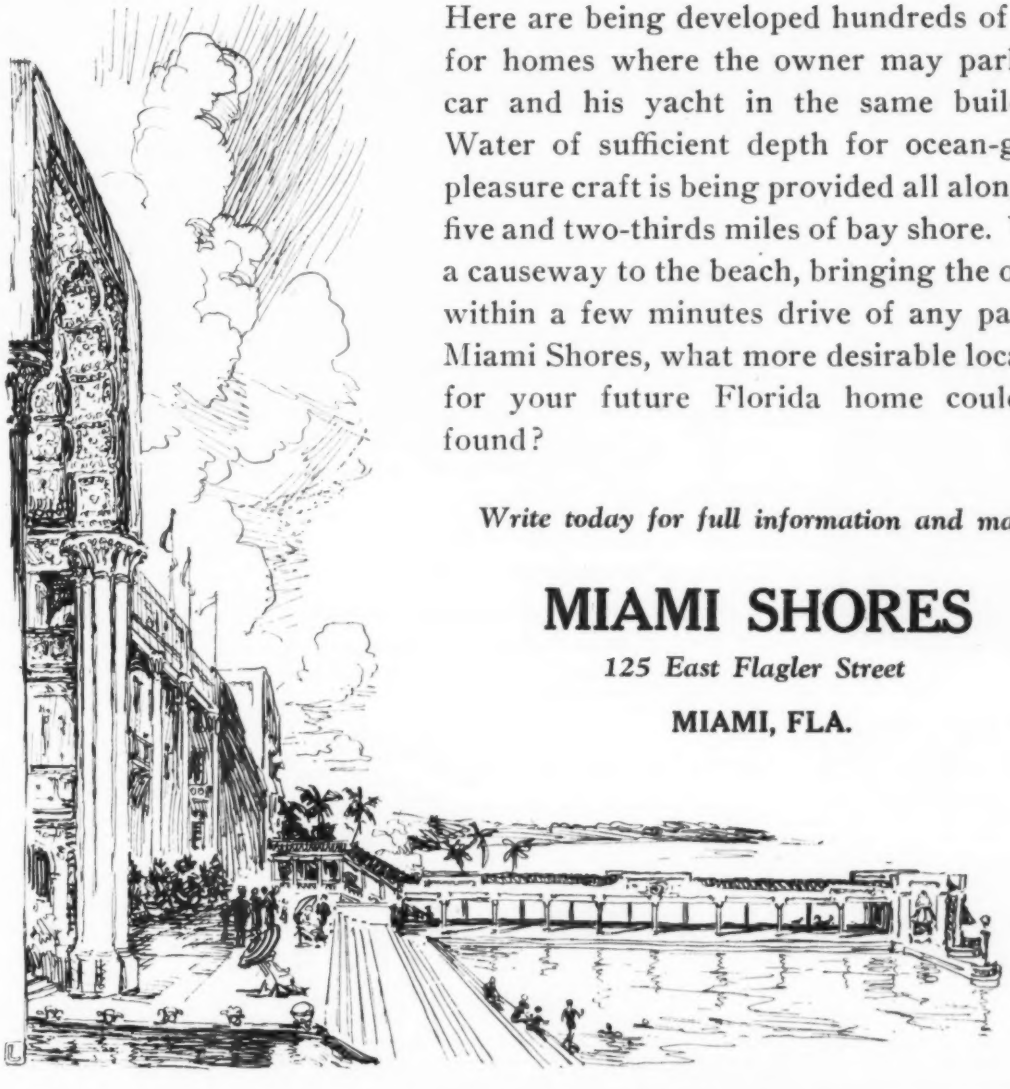
EVEREADY
FLASHLIGHTS
& BATTERIES
—they last longer

Advertising Index will be found on page 166

MIAMI SHORES

America's Mediterranean

An extraordinary development, lying just across the line of the new city limits of Miami, and in the direct path of expansion of that city northward along the shores of Biscayne Bay. Miami Shores is well-named, for it has more than 10 miles of frontage on bay, lake and stream.



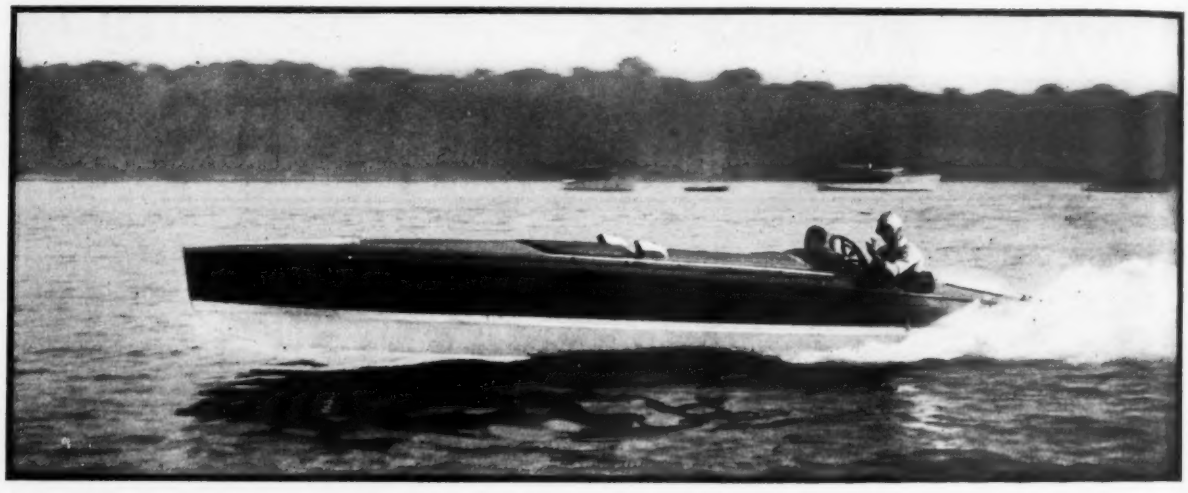
Here are being developed hundreds of sites for homes where the owner may park his car and his yacht in the same building. Water of sufficient depth for ocean-going pleasure craft is being provided all along the five and two-thirds miles of bay shore. With a causeway to the beach, bringing the ocean within a few minutes drive of any part of Miami Shores, what more desirable location for your future Florida home could be found?

Write today for full information and maps

MIAMI SHORES

125 East Flagler Street

MIAMI, FLA.



1064 Miles in 24 Hours on Gargoyle Mobiloil

"MILE after mile, hour after hour," Commodore Greening's "Rainbow III" sped on its famous two 12-hour runs covering 1064 miles. It was the first boat—motor or steam—to score 1000 within 24 hours.

Many factors contributed to this record-making run; and Correct Lubrication played its important part. On 2 gallons of Gargoyle Mobiloil rested the responsibility of lubricating the 200-h.p. 6-cylinder Packard Marine Motor.

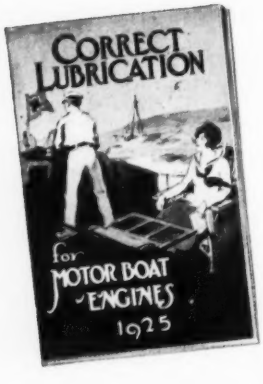
Record-making motor boat runs the world over are being made with the help of these high-grade lubricants. They are the first choice of the experiencd owners for the following reasons:

They are produced by the leading lubrication specialists of the world.

They are *not* by-products.

They contain highest lubricating qualities.

Their use results in minimum wear, minimum repairs and maximum operating economy in service.



A valuable booklet, "Correct Lubrication for Motor Boat Engines," will tell you the correct grade of Gargoyle Mobiloil for your particular type of engine. It is the result of the studies of 38 lubrication engineers, and will be sent you without charge. In writing, kindly address Department B Vacuum Oil Company, 61 Broadway, New York City.

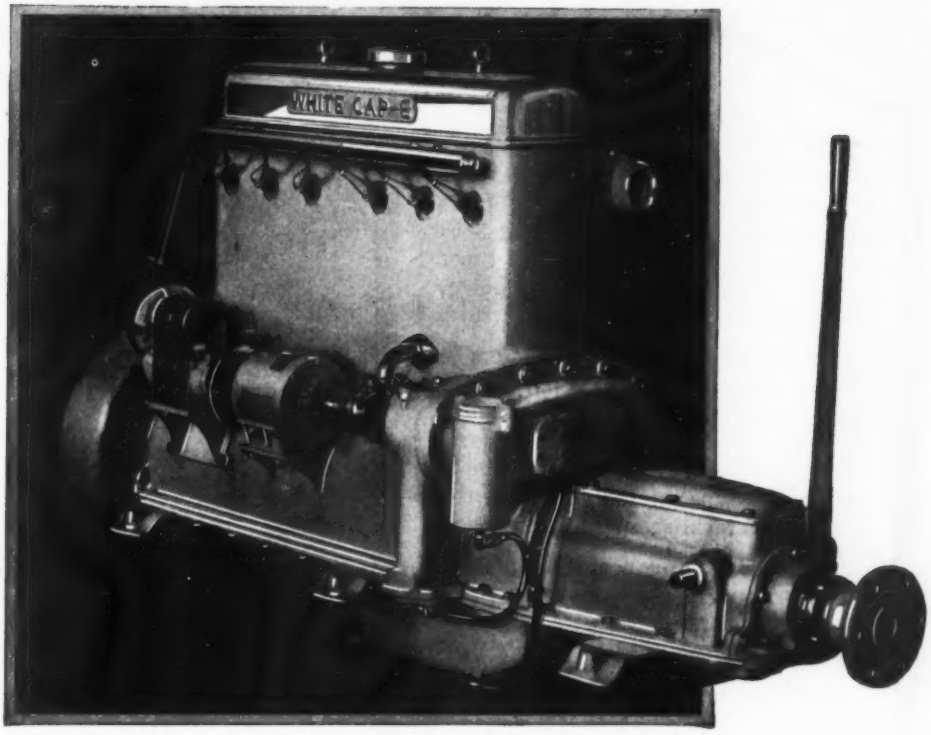
GARGOYLE

Mobiloil

Make the Chart your Guide

VACUUM OIL COMPANY *Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.* **NEW YORK, U.S.A.**

Advertising Index will be found on page 166



Speedboat Pep—Tugboat Sureness

Speed aplenty—whether you use it in the rush of business, or just for the thrill of splitting water.

And yet your White Cap is not a racing motor, tricky and temperamental. Right after a winning spurt in fast company, you can head downcoast for a thousand-mile cruise—without an instant's tinkering.

If all-weather, any-time power is what you want, White Cap is *your motor!*

Write for details, mentioning length and beam of your boat.

MORE POWER per CUBIC INCH

Wisconsin CONSISTENT

WISCONSIN MOTOR MFG. CO.
Milwaukee **Wisconsin**

WHITE CAP "4" and "6"

White Cap "4"—bore 4", stroke 5", displacement 251.2 cu. in. Horsepower 25 at 850, 31 at 1000, 38 at 1200 and 42 at 1400 R.P.M. Price complete, with electrical equipment and reverse gear, $795.

White Cap "6"—bore 3⅜", stroke 5", displacement 268.3 cu. in. Horsepower 32 at 1000, 43 at 1400, 53 at 1800 and 60 at 2050 R.P.M. Price complete, with electrical equipment and reverse gear, $995.

Model "A-M"—bore 4¾", stroke 5½", displacement 390 cu. in. Horsepower 32 at 800, 40 at 1000, 48 at 1200 and 54 at 1400 R.P.M. Price $1095.

TOBIN BRONZE stands out as the unrivalled metal for underwater service and for all exposed metal parts because of its remarkable resistance to corrosion. In addition it has great tensile strength, high yield point, toughness and uniformity of structure.

The American Brass Company, sole manufacturers of Tobin Bronze, employ special processes in the manufacture of this metal, which insure a uniform hardness and even distribution of internal strains. This eliminates the danger of cracking or failing in service.

America's leading boat builders use Tobin Bronze for all exposed metal parts.

Tobin Bronze is furnished in Sheets, Rods, Tubes and Turned and Straightened Shafting.

THE AMERICAN BRASS COMPANY
GENERAL OFFICES: WATERBURY, CONN.
In Canada: ANACONDA AMERICAN BRASS Ltd, NEW TORONTO, ONT.
World's largest manufacturers of Copper, Brass, Bronze and Nickel Silver
ANACONDA
from mine to consumer

Harpoon, owned by Commodore M. S. Cornell, winner of Handicap Express Cruiser Championship of America. Equipped with Tobin Bronze shafting and underwater parts.

Illustration drawn from photograph by Edwin Levick.

TOBIN BRONZE
REGISTERED U.S. PAT. OFF.

Advertising Index will be found on page 166

JUNE
1925

Vol. XXXV
No. 6

Photograph by E. Levick

Blackbird, P. A. Proal's hydroplane, built by the Red Bank Yacht Works, passing a mark in the race course of the Raritan Yacht Club

WE have never before experienced such a demand for copies of MoToR BoatinG as during the last three months. The issues of March, April and May were sold out a few days after publication date, even in spite of the increased number of these issues which we printed.

Twenty-five thousand copies of June MoToR BoatinG are being printed, and from the advance orders we have received, the indications are the edition will be exhausted soon. While we make every effort to keep a good supply of MoToR BoatinG on all newsstands, yet we have received many complaints lately that the "Sold-Out" sign was up by the time many of our regular customers reached the stands. Therefore, we would suggest that if you want to be sure of getting your copies regularly that you become a regular yearly subscriber and let us send your copy to you each month regularly.

Elsewhere in this issue are described several subscription offers which it will be to your advantage to investigate.

MOTOR BOATING
119 West 40th St.,
New York

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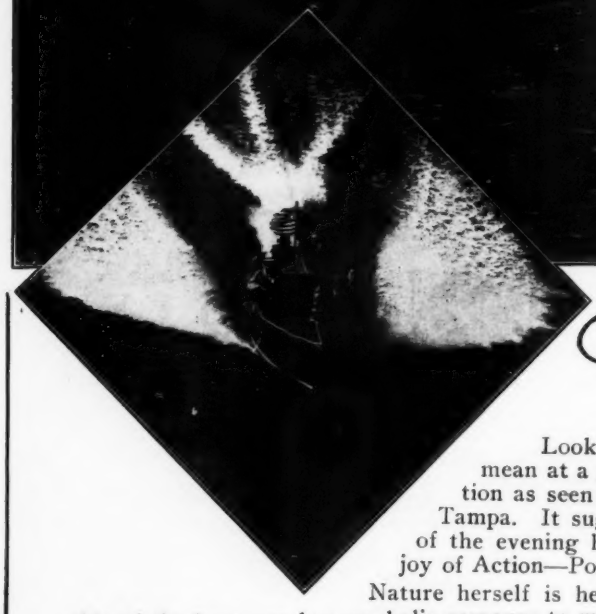


Tampa for Sports

Look at these two pictures. You can see what they mean at a glance. One represents the spirit of contemplation as seen in the sunset over Davis Islands in the Bay of Tampa. It suggests natural beauty—and the reflective mood of the evening hour. The other picture—inset—stands for the joy of Action—Power—Conquest—and the Thrill of Achievement.

Nature herself is here an artist. The foamy wings, one on each side of the boat, are her symbolic response to man's genius for speed.

The spirit of Tampa is in both pictures. Tampa is rapidly becoming the greatest winter center for sports in America. Davis Islands alone have 11 miles of bay frontage. The Davis Marine Speedway lies between Davis Islands and the Bayshore Boulevard, and these two localities embrace the most fashionable residential sections of the entire district.

"Tampa for Sports" is an inviting phrase. Events are turning the phrase into facts. National Regattas and Swimming Contests, Tennis Tournaments and International Golf combine with the growing facilities for every type of sportsman to make sporting preeminence for Tampa

AND

DAVIS ISLANDS
TAMPA IN THE BAY

D. P. DAVIS PROPERTIES, TAMPA, FLORIDA

Advertising Index will be found on page 166

JANEY III
A Wonder Boat

A Super Diesel Yacht Designed by John H. Wells, Inc., Which Embodies Every Known Device for Safety and Comfort

THE newest Diesel yacht has been completed. Janey III, launched a few months ago at the yard of the Consolidated Shipbuilding Corporation, its builders, has been turned over to its proud owner, Walter O. Briggs, of Detroit. Mr. Briggs has long been an enthusiastic yachtsman, and his new craft stands out as one of the finest boats of its type today.

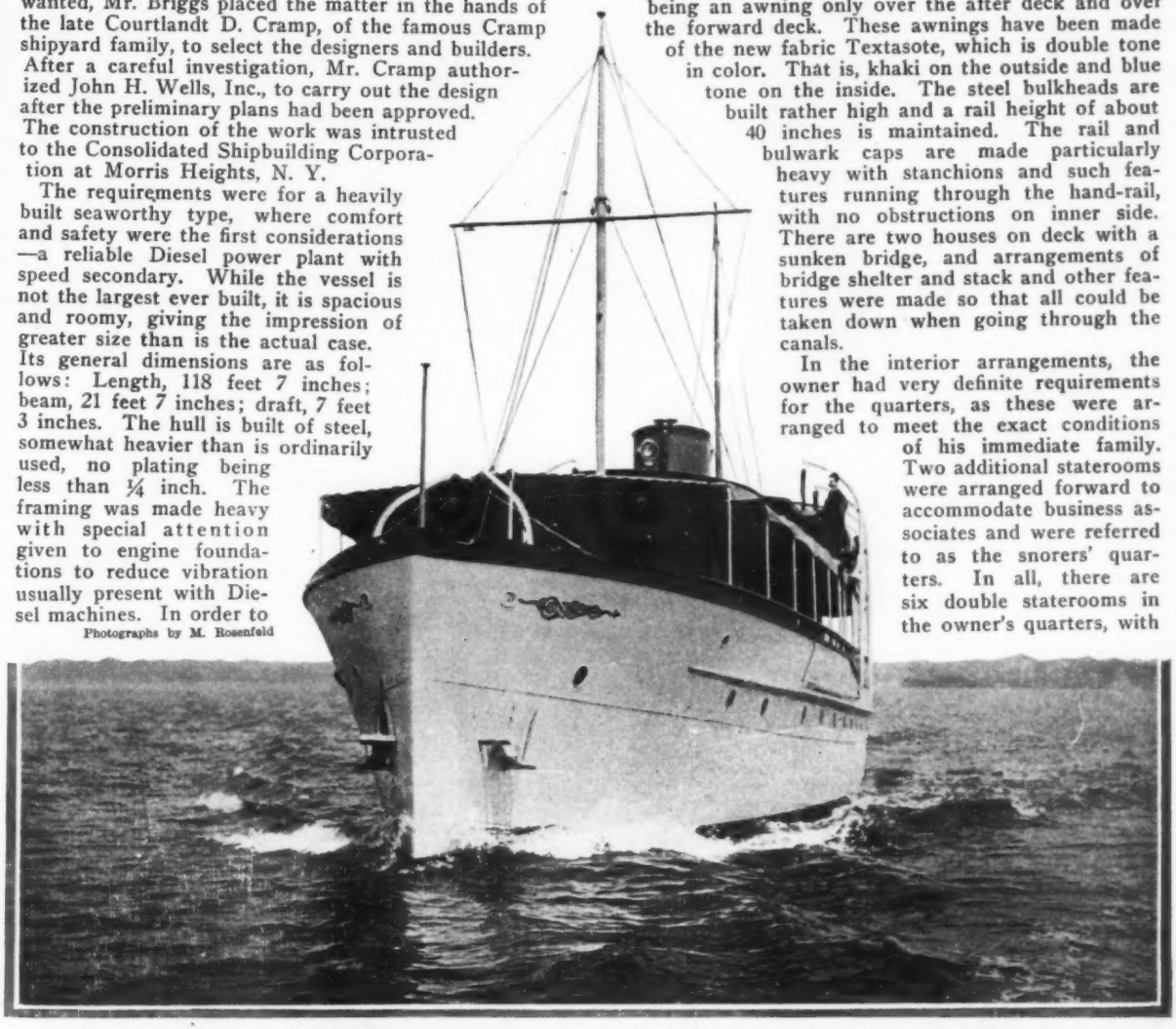
When a decision was reached that a new boat was wanted, Mr. Briggs placed the matter in the hands of the late Courtlandt D. Cramp, of the famous Cramp shipyard family, to select the designers and builders. After a careful investigation, Mr. Cramp authorized John H. Wells, Inc., to carry out the design after the preliminary plans had been approved. The construction of the work was intrusted to the Consolidated Shipbuilding Corporation at Morris Heights, N. Y.

The requirements were for a heavily built seaworthy type, where comfort and safety were the first considerations—a reliable Diesel power plant with speed secondary. While the vessel is not the largest ever built, it is spacious and roomy, giving the impression of greater size than is the actual case. Its general dimensions are as follows: Length, 118 feet 7 inches; beam, 21 feet 7 inches; draft, 7 feet 3 inches. The hull is built of steel, somewhat heavier than is ordinarily used, no plating being less than ¼ inch. The framing was made heavy with special attention given to engine foundations to reduce vibration usually present with Diesel machines. In order to do this, the designers arranged for a complete innovation in the engine bed construction with continuous belt frames about the engine room, foundation members are heavy and well stayed, and running a long distance fore and aft, as well as thoroughly braced amidships.

The decks and outside trim, except houses, is of teak, while the finish of the houses themselves is mahogany. The upper deck is continuous from side to side, and runs practically the full length of the boat, there being an awning only over the after deck and over the forward deck. These awnings have been made of the new fabric Textasote, which is double tone in color. That is, khaki on the outside and blue tone on the inside. The steel bulkheads are built rather high and a rail height of about 40 inches is maintained. The rail and bulwark caps are made particularly heavy with stanchions and such features running through the hand-rail, with no obstructions on inner side. There are two houses on deck with a sunken bridge, and arrangements of bridge shelter and stack and other features were made so that all could be taken down when going through the canals.

In the interior arrangements, the owner had very definite requirements for the quarters, as these were arranged to meet the exact conditions of his immediate family. Two additional staterooms were arranged forward to accommodate business associates and were referred to as the snorers' quarters. In all, there are six double staterooms in the owner's quarters, with

Photographs by M. Rosenfeld

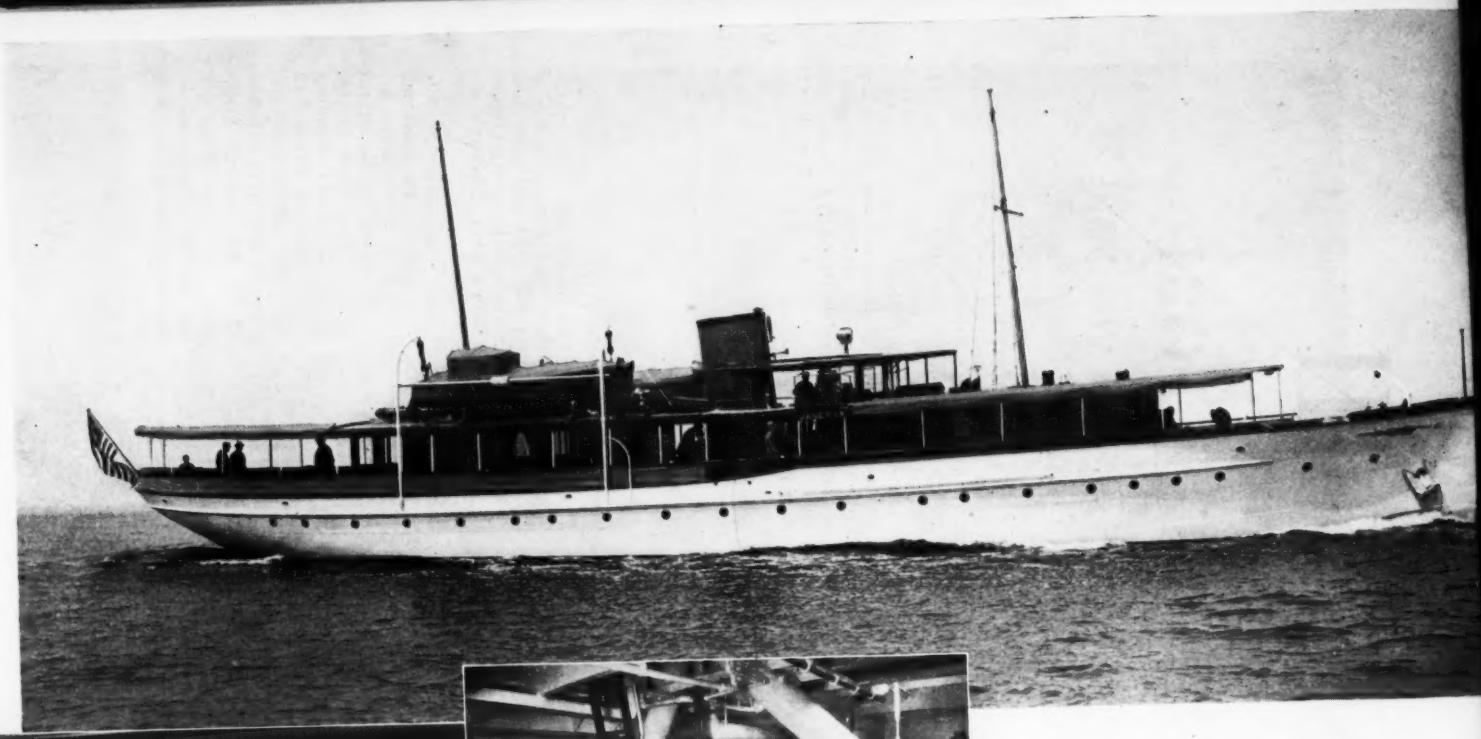


When coming head on, Janey III gives an excellent impression of strength and seaworthiness

Janey III was built at the Consolidated Shipbuilding Corporation's yards for W. O. Briggs of Detroit

three baths. One of these is individual to the owner's room. Another is off the passage way, while still another is between two of the staterooms. Sleeping room is afforded for twelve people, with comfortable quarters and direct outboard ventilation in each stateroom in addition to the regular ports.

All quarters below decks are finished in enamel with mahogany trim and doors. All furniture is mahogany, with plate mirrors on doors and over bureaus. Every available inch has been used for storage, and useful purposes. The passage way between rooms is particularly short, in order to give all possible space to the staterooms.



Her power plant consists of two 180-h.p. Winton Diesel engines of the latest type which turn over at 350 revolutions and drive her 14 m.p.h.

The main saloon is aft on the main deck and is a most luxurious apartment. It contains a Weber Duo-Art reproducing piano, Vocalion and a Radiola radio receiver

On the deck there are two deck houses, the after one of which is arranged as a music room and lounge, with divan seats and chairs. Large windows in the middle room with skylight over. The music equipment consists of a Weber Duo-Art reproducing piano and a Radiola receiving set on one side with an Aeolian Vocalion on the other. All decks have been finished in the natural wood and are scrubbed and scoured to a perfect finish. The contrasting color of the Kuhls elastic seam compound adds to the excellent appearance.

The forward deck house is the dining room, with steps on the starboard side which lead to the two staterooms below. On the port side is a roomy pantry, with a galley across the after end on deck. The refrigerators here are all connected to a Clothel refrigerating machine in the engine room.

(Continued on page 100)

(Continued on page 100)
piano, Victrolion and a Kadiola radio receiver

Detroit's Main Spring

W. D. EDENBURN, affectionately known as Eddie everywhere that boats float and yachtsmen gather, is the main spring of the racing activities which have made Detroit famous as the home of fast boats. He is the human dynamo which keeps the sport moving at full speed ahead throughout the other sections of this great sea loving nation of ours.

Eddie's service to the world is not alone confined to the sphere of yachting but it spreads out to everything automotive, which indirectly is of considerable benefit to the sport which is nearest our hearts—and his.

Twenty years ago W. D. Edenburn began nursing various automotive activities. Today none of these require any such treatment to keep them alive but they have grown up and become the most important classics in our field of sports.

In the days of old it was Eddie who organized practically every contest on land and then saw to it that his plans were carried out in a way he had planned they should be. Unlike so many other men, good at organization, Eddie does not stop there but carries on and produces as well.

As might be expected, in boyhood days, Eddie was a jack of all trades, ranging from selling novels and near cigars to tempting the vamps to buy from him the latest in pumps and boots. While Eddie was marketing shoes he was also organizing and managing a bowling league in Indianapolis. He can still tell you the records made by the bowlers two decades ago. It was this work which gave Eddie his first contact with newspaperdom as he collected the various bowling

(Continued on page 110)

Huck Says

I Explains Why I May Give Up Yachting

Well, Chap, I doesn't know whether I wants to write for your paper any more or not, anyways. In the April issue you sticks me on the opposite page from a beautiful young woman (which it is not what I am kicking about), but I has never seen her before, and in spite of the fact that I wires you once and writes you twice and asks you to tell me who she is and where I locates her, you doesn't make no reply to me whatever.

I HAS a few more things to tells you about cruising in Florida before I transfers my attentions further north. Before I forgets it I wants to know, has anybody ever heard what happened to Cur de Lyon? The last I sees of him, he has a map of Miami down on the floor of his room; he already bought half of Miami Beach, and he was walking around the map on all fours, and his eyes they was badly crossed, and glassy-like, and he was mumbling a lot of things to himself what they sounds like "Fifty per cent," and I takes one look in the door and I figures that maybe pretty soon he gets violent, so I shuts the door quietly and beats it. Now they closes up the Flamingo for the season the next day and I suggests that they better look in his room. The number, it was 316. Maybe the excitement, it bumps him off, and if that it is what happens, he wouldn't keep until next season.

Now, just before I leaves Miami, a very sad thing, it happens. The feller what was the officer of the Coast Guard what raided me in the April issue, he gets lost at sea. His name, as I remember it, it was Tom Gynne. Well, Tom, il est sortit, as they says in Parus. He was a nice feller. Now that he is gone, I is able to give the facts a little more accurate-like than I ever done before. A couple days after he raids me, he comes around one morning and he says to me, says he, "Huck, you is a nice feller." "I admits that," I replied, "but what is the charge today?" "They is no charge whatever today," he smiles, drawing a package outn' a bag. "You was the most courteous feller what I ever raids, and just to prove how I appreciates your courtesy, and that they isn't no hard feelings, I wants to present you with this on behalf of the Total Abstinance League," with which he hands me a quart of genuine Benedictine.

My tongue, it runs aground on my eppyglottis and my eyes they pops out, so I has never been able to see right since. "Wha, wha', wha', whe', where is the catch?" I strangles. "They isn't any catch," he rejoins. "What does you think it is?" "I'll bite—what DOES I think it is—a PLANT?" "What does you mean—PLANT?" he demands. "Well," I gurgles, "you sees it is thisaways: The other night when you raids me, you doesn't find nothing on my boat. Now if I takes this, they will be something on my boat and maybe you then nabs me." "Does I looks like that kind of a guy?" says he, stepping on my foot and breathing heavy-like in my face and doubling up his fists. "No," I assures him hasty, "of course you doesn't look that ways. I was just trying to be funny, I was—honest."

You knows how it is, Chap. I figures fast, and I allows as how I rather get pinched for having a bottle of Benedictine aboard than get crocked by that baby, I had, and I smiles at him, just as if he was my papa and I was his little baby boy, only he continues to scowl at me, holds out the bottle and says, "Does you take it, or doesn't you?" and I takes it quick-like before he uses it on my head, and I thanks him profuse and he was off.

Now I leaves it to Wayne B. Wheeler himself, what could I do? If I done wrong, I deeply regrets it, and I apologizes to the Anti-Saloon League, as I is in full

sympathy with the Anti-Saloon League, as I doesn't believe in saloons, and I thought up that idea before they does too, but saloons, they doesn't have nothing to do with no bottle of Benedictine in my hand, with me standing silly-like on my boat. I asks you or any other reasonable citizen, if somebody gives you a swell bottle of Benedictine, is you so pure that you throws it overboard just so you upholds the majesty of Mister Volstead? You does not! Now, Chap, I doesn't like Benedictine, I doesn't, but you knows how the ladies does. Well, they gets wind of it, for news it travels fast, and all that week I never was so popular with the Florida Oranges before, until it was all gone, and then they doesn't pay no attention to me again, as usual.

Well, a couple of weeks later, who should blow around but Tom Gynne again. He crashes aboard, and I regrets to state that I notes the odor of licker on his breath. "You forgets to use your Listerine," I informs him. "Wazzat?" he says, missing seven steps on the way down the companionway and landing in my best sheet steel waste basket. "I means that you has a slight attack of Halitosis," I explains further. "Iszatso?" he comes back, trying to pull out one foot what was stuck in the waste basket, which he done all of a sudden, and sits back and cracks a whole pile of my latest Victor Records. "Watch out," I warns him. "I'll wash out all right," says he, and makes a landing up against the galley door, which it isn't latched and it busts open, and puts his hand on the Shipmate, what was red hot, and laughs—they was then the other ways around. This, it cools him off a bit and he sits down and he says, "Huck, I needs a drink bad, I does. Leave me have one." "I hasn't got none aboard," I tells him truthful. "What, you hasn't got no whiskey aboard!" I assures him that it was a fact, and he goes on, "Well, Huck, that, it is a helluva note. I tells you what I does. I makes you a present of a case of Johnnie Walker Black Label, what it is the best licker obtainable down here." Now, Chap, I assures you I does everything I can to discourage the feller and I finally figures that I has convinced him I was right and he was wrong.

He was tight and he was stronger than me, and he starts to drag me off, so I goes peaceful-like

Well anyways he jumps up and he says as how he wants to take me out to the hoss races. Now Chap you recalls that the hoss races, they brings back nothing but unpleasant memories about that young woman what passes the bum check on me in the April number, but Tom, he was tight and he was stronger than me and he starts to drag me off, so I goes peaceful-like. We gets into his Packard Single Twelve, which it is pretty good for a revenue officer, and he drives out to the race track in nothing flat.

He pulls out a bundle of bills what would choke a camel, bets two hundred berries on a hoss what comes in last, what doesn't trouble him at all, it doesn't, and then he drags me into a little place where you eats. "Give me a drink of good whiskey," he yells at the proprietor, but this feller he says as how they hasn't got any on hand, and Tom he yells at him some more and it doesn't get him nothing, so he pulls out a five-dollar bill and he throws it in the feller's face, and says, "Well, all right, you

(Continued on page 112)

Carl G. Fisher

He Says

All Right

A Superhuman Foresight Into Future to Make Instantaneous Decisions— You Lead for Him Without Interference

By STEVE HANNAGAN

CARL G. FISHER was sitting on the bridge of his cruiser, Shadow H, as it churned up the waters of colorful Biscayne Bay off Miami Beach, Florida, at a merry clip of 30 miles an hour. His penetrating eyes were squinted into the far off horizon.

Possibly he was peering into the future—of new feats to perform in the old world which was far beyond his gaze; but more probably it was into the past, a past that holds more interesting, vivid experiences than the books of pirate tales that line the shelves and tables of his several libraries.

It must have been the past into which he was staring. For on that gaze was written the expression: "Well, they thought I was a damned fool, didn't they?"

Yes, they did think he was a fool—one of the damndest.

(C) Underwood & Underwood

The piece of Florida at the left was a desolate swamp until Carl G. Fisher made Miami Beach into a play ground for a continent. Property on Alton Road, the street in the center of the illustration, running from the ocean to Biscayne Bay is selling for $1,500 a front foot

Let's Do It

Possibilities, the Power
A Willingness to Let
Where Any Will Follow

HANNAGAN

That means the world in general that knew him when he left Indianapolis and went to Florida to make into an Isle of Utopia a stretch of mangrove swamp that had attracted his attention during a yachting expedition among the Florida keys.

But more directly it means the people of the city of Indianapolis, where he rose from a butcher boy on a narrow gauge railroad train to one of the most financially successful men in the community—a success that should have and would have satisfied a less adventurous soul.

It means those well-wishers who pointed to him as a padded cell candidate because he took the last cent of his millions to invest in a dream at an age when most men of wealth are ready to throw out the clutch and coast to the finish.

"They thought I was a fool!" You could see the expression written on his face. He laughed. Well may he. His crazy dream has come true more than once and instead of being pointed out as the madman from Indiana he is looked upon as another Hoosier genius.

Carl G. Fisher was born in Greensburg, Indiana, January 12, 1874. A squint through his history will immediately lead you to believe that on that day he received his only assistance from a bustling, outside world.

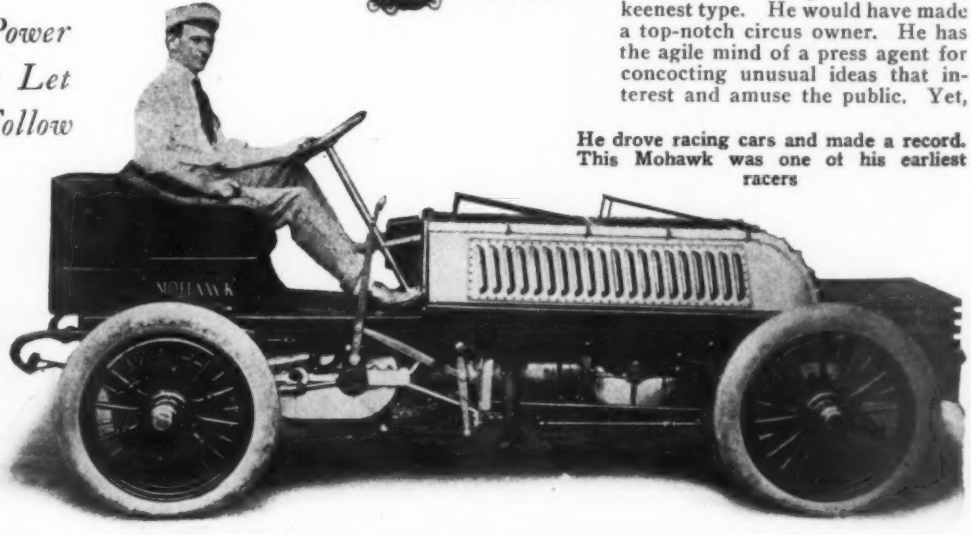
For neither college nor university, high school nor grade school has played any part in the events leading up to his tremendous success in a score of undertakings, any one of which would have written his name across the pages of Who's Who.

He attended a one-room school until he was twelve years old, then he became a news butcher, peddling newspapers, candies and other tidbits to travelers throughout the United States. He got his first glimpse of the outside world through the soot-grimed windows of local trains.

Unquestionably he attained his educational foundation a few years later when he worked in a book store, with access to all the masters. Without a doubt his financial foresight was sharpened by his working experiences in a bank.

Carl Fisher is a promoter of the keenest type. He would have made a top-notch circus owner. He has the agile mind of a press agent for concocting unusual ideas that interest and amuse the public. Yet,

In the early days he rode over Indianapolis in a car hitched to a balloon



He drove racing cars and made a record. This Mohawk was one of his earliest racers

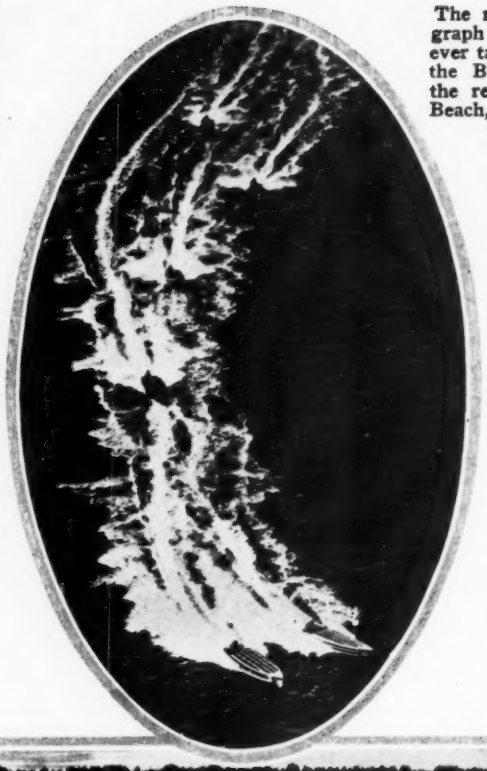
unlike most promoters, he stands in the background of his idea rather than in the calcium it creates. He stands in the shadows of his achievements.

He won his first professional fame as a bicycle racer and added laurels to his speed encounters as an automobile racing star in the days when it was a day's work to wheel a bucket seat speedster around the treacherous dirt tracks of the pioneering days that were so important in developing the passenger cars in which we ride today.

But all these races had a forerunner in Fisher's childhood exploits. For, as a lad, he raced snow sleds on a very long hill at Lebanon, Ohio, as part of the advertising effort of the leading drygoods store in the city. His daring was developed early in life.

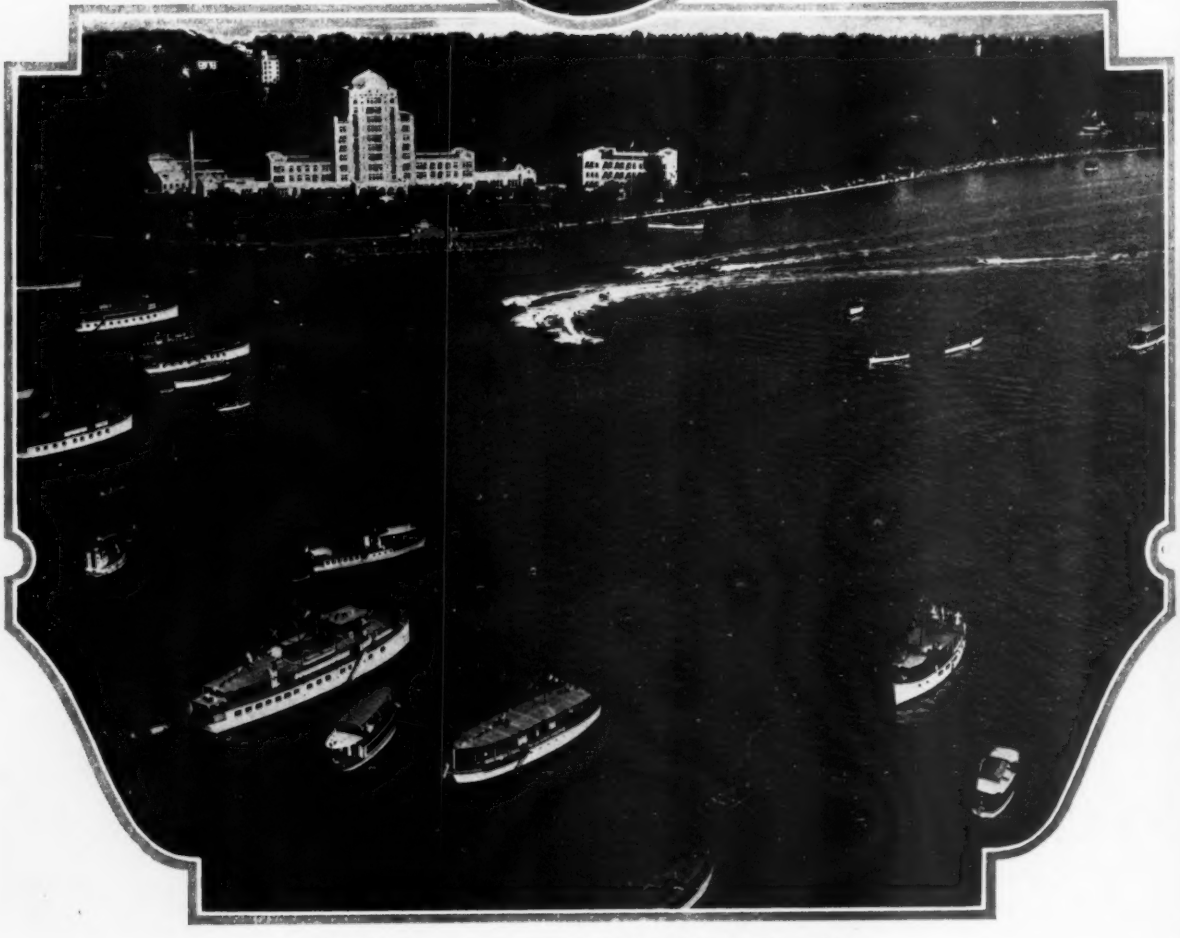
There are many human exploits which portray Fisher with more accuracy than any generalized description. For instance, a few years ago he leased from the government a small key of about three acres south of Miami Beach. On it he constructed an island home and a dock—an investment of probably $25,000—as a place to saunter away with his thoughts and dreams—to escape from a turbulent world. The key was auctioned by the government. Fisher and one other person sent in their bids. The other man bid higher and was awarded the island. The government gave Fisher permission to remove his personal property—the house and dock. The successful bidder came with an offer of $3,000 for the entire layout. That was as much as he would give—no more. There was no controversy. Fisher's answer was to go to the island and touch a

(*Continued on page* 80)



The most remarkable photograph of a motor boat race ever taken. The ten boats of the Biscayne Baby Class at the recent regatta at Miami Beach, bunched at one of the turning buoys

Photographs copyright by Wayne Evans

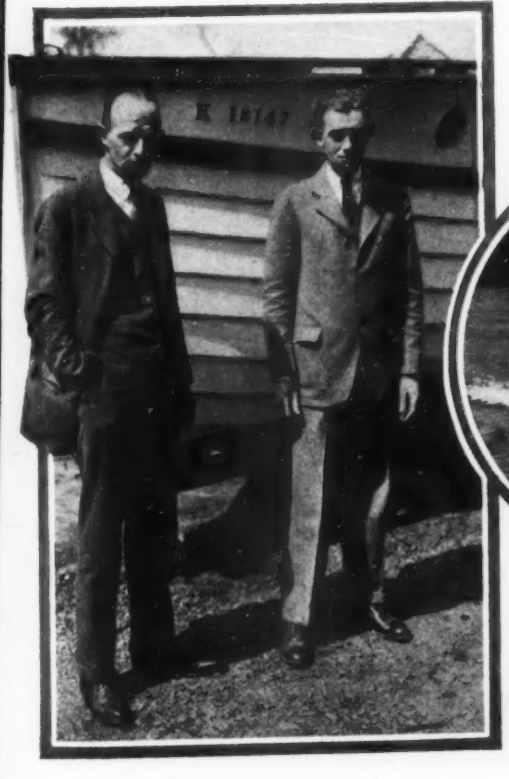


Carl Fisher's own race course at Miami Beach, Fla., where the fastest motor boats in the world compete every winter

While it is known to be incorrect to fly the Union Jack at the bow, the junior crew could not be sent forward to change it after the anchor was raised

A *Smart* 26 Footer

Successful Trials Show the 26 Foot Cruiser, Built by the Banfield Sea Skiff Works, to Be an Able Speedy Craft



Charles A. Hindman and J. E. Banfield, leading spirits in the Banfield standardized cruiser production program

A bow view of the 26 foot Banfield cruiser shows her to be sturdy and trim

A PECULIARITY of the boat-building industry is that no one worries about buying a boat until the first warm days of spring. Then suddenly, great numbers of potential yachtsmen realize that they have wanted a boat, but have neglected to place an order far enough in advance. Down at Atlantic Highlands, N. J., the Banfield Sea Skiff Works have been busily turning out their stock 26-foot cruiser in numbers. As soon as the weather became respectable and the ice disappeared, one of them was taken out for trials. A 12-16 h.p. Kermath motor stowed under the cockpit floor drives the boat along at a lively clip. It will be noticed from the illustrations that this little craft is a good looking job with a roomy cockpit and ample cabin space. Berths are provided with cushions and the interior is brightly finished in white.

Outdoors Calls

The Addition of An Outboard Engine to the Sport Equipment of the Modern Family Rounds Out the Collection and It Soon Becomes the Most Popular of All

The easy portability of the new outboard engines permits of their being handled by the ladies without the necessity for having a mere man join the party. The engines are readily placed in position on the stern of the boat and start with a quick pull of the starting handle

An unexcelled opportunity for a day in the open is present at all times when father owns an outboard engine. Any time he can lay aside his business cares he will find mother and the youngsters all too willing to go on a boat ride and picnic

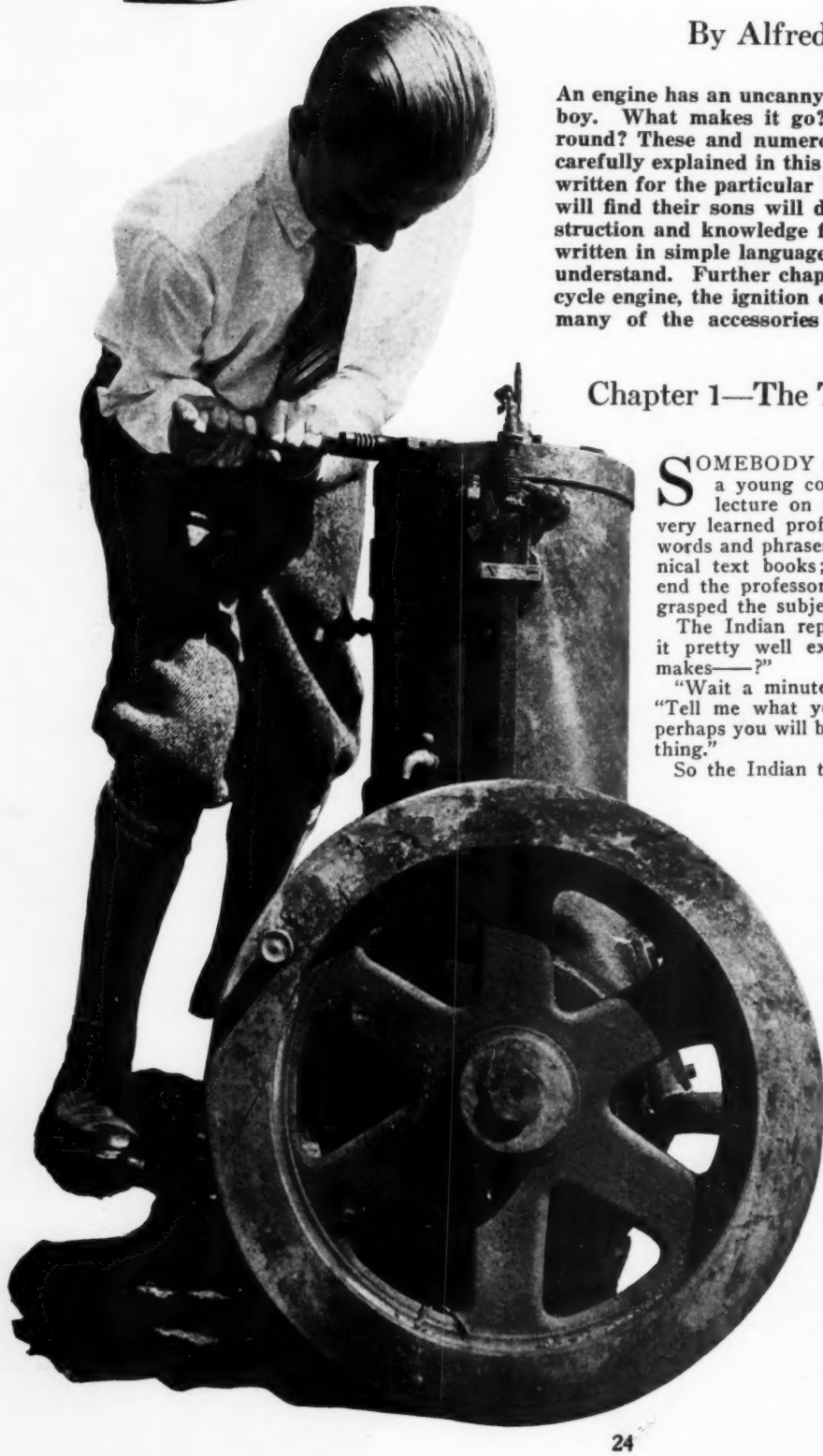
The OUTBOARDS

Years ago the boys and girls enjoyed a quiet time rowing on the lake. Boating still has fascinations which are much more thrilling and exciting, now that a peppy little engine on the stern does away with the tiresome work at the oars

The aquaplane has long been known as a thriller of the first order. It required a boat with lots of power to furnish the necessary element of speed. The same sport can be enjoyed by the owner of an outboard engine, using the new type aquafloat, designed especially for this service. It is capable of sustaining the rider and is not entirely dependent on its speed to keep it on the surface

A Boys' Story

By Alfred F. Loomis



An engine has an uncanny fascination for the modern boy. What makes it go? Why does the wheel go round? These and numerous other questions will be carefully explained in this and the subsequent articles written for the particular benefit of the boys. Parents will find their sons will derive a vast amount of instruction and knowledge from the stories. They are written in simple language and terms so that all may understand. Further chapters will deal with the four cycle engine, the ignition equipment, carbureters, and many of the accessories pertaining to the engine.

Chapter 1—The Two Cycle Engine

SOMEBODY once told me a story about a young college Indian who attended a lecture on marine engine operation. A very learned professor gave the lecture, using words and phrases that are only found in technical text books; and when he came to the end the professor asked the Indian if he had grasped the subject.

The Indian replied, "Yes, sir, I understand it pretty well except for one thing. What makes——?"

"Wait a minute," interrupted the professor. "Tell me what you do understand, and then perhaps you will be able to puzzle out the other thing."

So the Indian took a long breath and said: "Well, sir, the gasoline, having been converted to a gaseous mixture in the carbureter, is drawn into the cylinders in an inflammable state, is ignited by the electric spark in the combustion chamber, which is timed to the instant of greatest compression. The resulting explosion impels the piston down the bore of the cylinder and imparts a rotary motion to the crankshaft, which power is transmitted by means of suitable shafting to the propeller, which drives the boat ahead. That is what you said, sir, is it not?"

"Approximately," said the professor. "You have put it very badly, but I can follow you. Now what is it about the operation of the engine that you fail to comprehend?"

"I can't make out," said the Indian, "what it is that makes the engine go."

* * * * *

# of ENGINES

In writing a book for boys about marine engines I have an advantage over the college professor. I don't know most of the technical words he uses, or if I do happen to know them I am so proud of the fact that I shall stop to explain what they mean. Some of my boy readers who know more about engines than I do myself

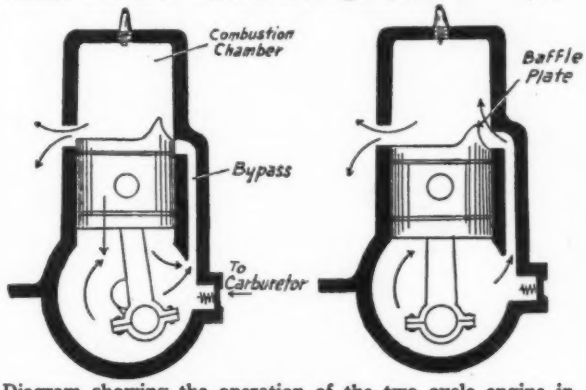
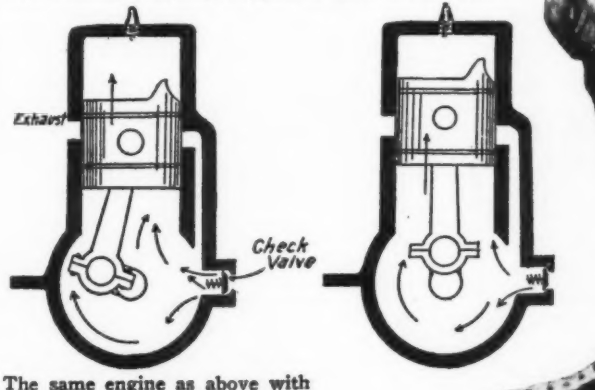


Diagram showing the operation of the two cycle engine in its simplest form, piston at low point of its travel

(the harbors are full of them these mechanical days) will be impatient with me for holding up the action of the story by these explanations. Others, who live inland and haven't enjoyed the advantages of a boating life, may be glad to have the difficulties



The same engine as above with the piston moving up to compress the gas charge, while the new charge enters below through the check valve

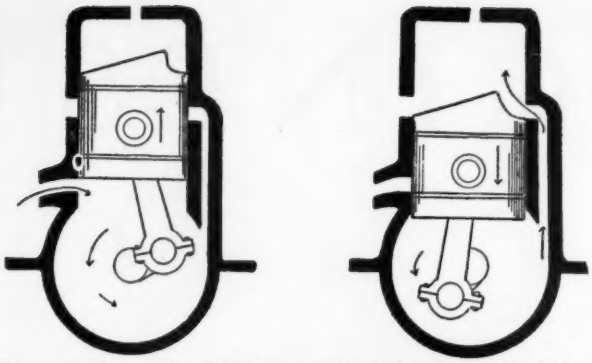
cleared up as we go along.

To begin at the very beginning, we'd better satisfy ourselves as to what we mean by a marine engine. Any engine that is used at sea is a marine engine, but the term has come to apply particularly to gasoline machines, which belong to the family of internal combustion engines. Here we're up against it again. What is an internal combustion engine?

Perhaps the best way to describe it is to compare it with a steam engine. A steam engine, as every boy knows who has wanted to be a locomotive engineer, is made up of a fire box for developing high heat, a boiler for generating compressed steam, and cylinders with pistons which shoot steel rods in and out and turn wheels. Before the wheels of a locomotive can turn, the fire must burn, the water boil, and the steam rush into the cylinders, moving the pistons and pushing the rods.

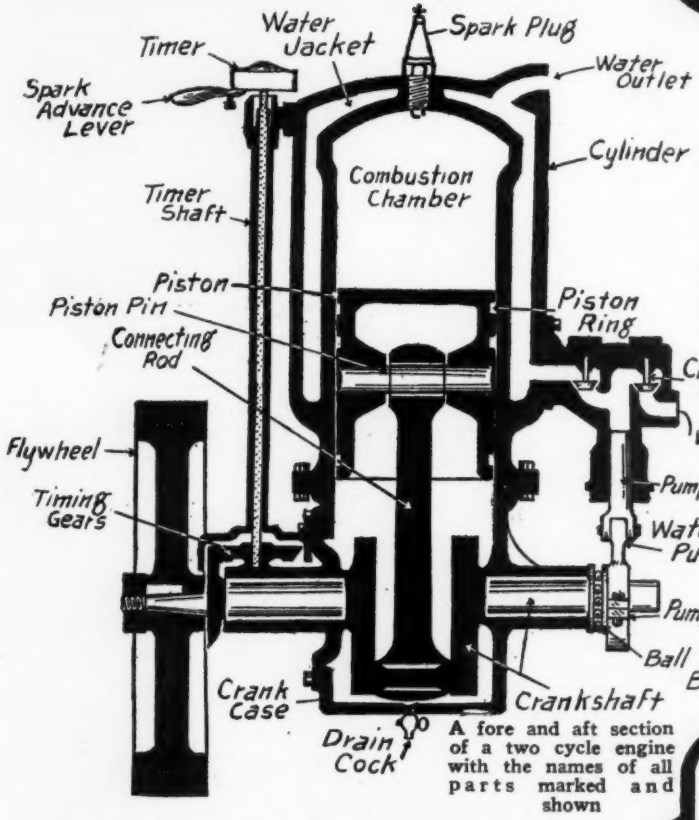
But with the internal combustion engine, all these processes take place inside the cylinder. An electric spark, jumping across a gap about a thirty-second of an inch wide, takes the place of the locomotive's fire box and the tender full of coal. Instead of boiling a quantity of water and thus producing steam, this spark sets fire to a cylinderful of gas which is made up of gasoline and air and is almost as explosive as gunpowder. Then this burning mixture, like an exploding charge of powder in the barrel of a gun, and also like the compressed steam in the cylinder of a steam engine, fights to get out into the open air. In the case of the gun the powder pushes a bullet out before it. In the case of the engine the explosive mixture pushes against the piston until a valve is opened and the pressure is released.

I should go on at this point and explain what the piston does after the power of the burning mixture has been exerted against it; but before we lose sight



The operating cycle of the three port engine draws the fuel charge in through one port and then forces it into the combustion space through the by-pass

of the steam engine I want to give an explanation of the terms two-cycle and four-cycle. These terms used to be written two-stroke-cycle and four-stroke-cycle, but as we haven't time to say the whole thing we have left



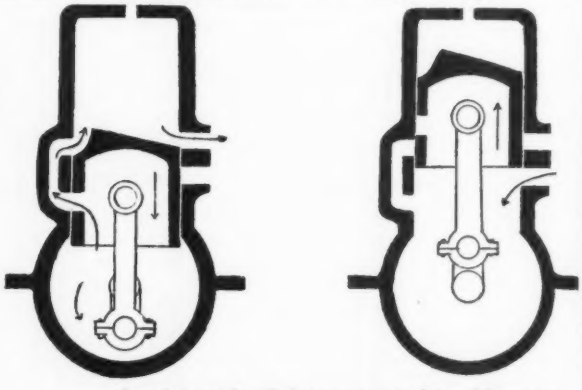
A fore and aft section of a two cycle engine with the names of all parts marked and shown

out the middle word. In England they have shortened the phrase by leaving off the last word. Hence, two-cycle in America means the same as two-stroke in England. We are aiming at the fact that marine engines are built in two types—two-cycle and four-cycle.

Referring again to steam, we might truthfully call a locomotive a one-stroke-cycle type of engine. That is to say, each stroke of the piston completes a cycle of operation. The steam, being generated externally, is sent alternately to opposite ends of the cylinder, pushing first on one side of the piston and then on the other. Each stroke is a power stroke, and there is no wasted movement of the piston. In this respect the steam engine is superior to the internal combustion engine, which can deliver power only to one side of the piston.

The two-cycle is so called because there are two strokes —one up and one down—in each cycle of operation. Only every other stroke is a power stroke.

With the four-cycle engine only one stroke in four is a power stroke. The three remaining strokes in each cycle of operation—one down and two up—all perform useful work, but do not develop power. An explanation of the four-cycle engine will be taken up after we have looked into the operation of the two-cycle engine.



Another style of three port engine with a portion of the passages in the piston wall. This operation is similar to the diagram on the left

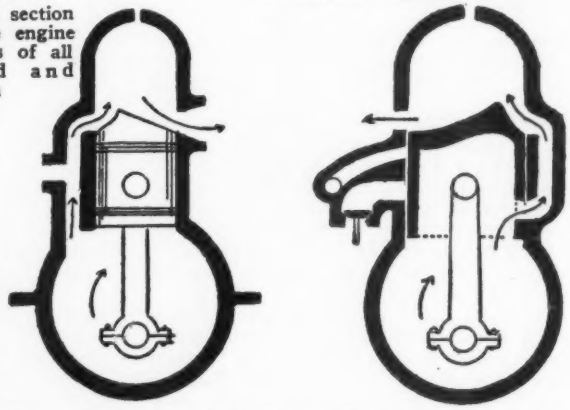
OPERATION OF THE TWO-CYCLE MOTOR*

Simplicity is the keynote of the design of the two-cycle engine. Its principal immovable parts are the cylinder and the crankcase, or base. The chief moving parts are the piston, a hollow affair which slides up and down in the cylinder; the crankshaft, which revolves inside the base, and the connecting rod, which connects the piston to the crankshaft is the flywheel, which inside the engine and cannot be seen unless it is dismantled. Outside the engine and attached firmly to one end of the crankshaft is the flywheel, which looks like an iron grindstone, but which revolves much more rapidly.

Other parts of the engine are the carbureter, which mixes the gasoline with air and turns it into an explosive vapor; the

(*Continued on page* 116)

*The words *motor* and *engine* are used interchangeably in these articles.



Two cycle engines which are a combination of the two and three port types

A fox entering upon the route that many a good fox has gone—namely, to the furrier's shop, and eventually to become a part of the raiment of some feminine wearer

Above: The journey was not all a bed of roses. There were times when it appeared to be an impending funeral

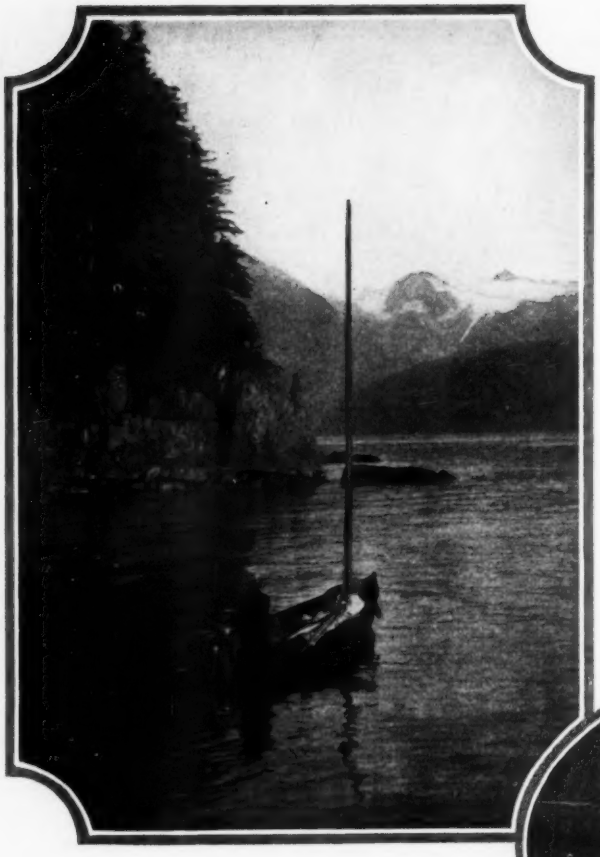
Among the Glaciers of Part II Alaska

Racing With Icebergs in Twenty Mile Tides—Navigating in Fog on the Way From Skaguay to Seattle

By JOHN EDWIN HOAG

(Photographs by the Author)

ONLY boats of very shallow draft can get up Taku River to Twin Glacier Camp. There is plenty of water in the river for boats drawing five or six feet of water, but they cannot get over the bar that the river has deposited near its mouth in Taku Inlet. Even with the little Ikigihk, which can run almost anywhere that's a little damp, we were churning mud and sand for several miles before we finally got over the hump, and into the river channel beyond. Then we had to fight a strong current, and dodge a miscellaneous assortment of floating icebergs before we accomplished the several miles up Taku River to

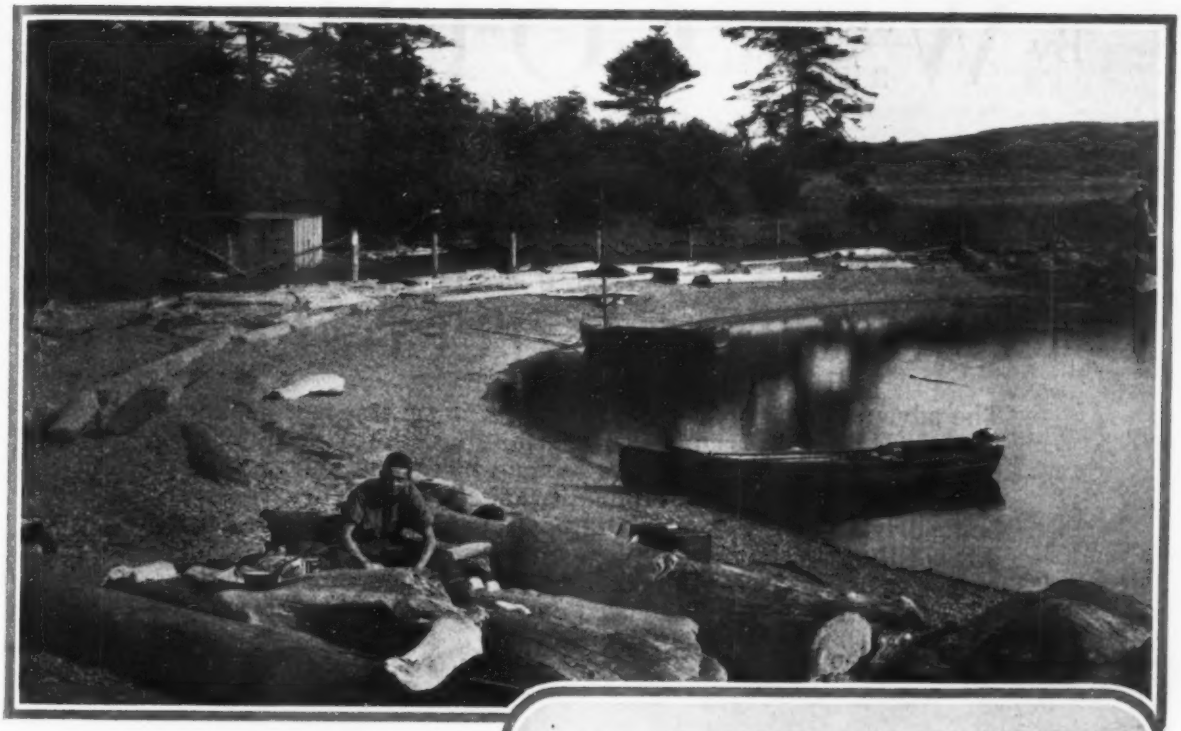


Along the salt water river when the waning hours of daylight necessitated making camp, finding a camp site was not always easy

the landing at Twin Glacier Camp. Even with the long hours of summer daylight in Alaska, the day was about gone when we arrived. Our hostess, of course, had no knowledge of our coming, there being no telegraph or telephone communication between there and Juneau. A pack of howling malemutes greeted us at the boat landing. We were delighted, however, to find Mrs. Gray—a buxom lass with a perpetual smile, and a dialect that was as difficult to understand as it is to read Bobby Burns. She welcomed us into the great log house, which is the main chamber of the hunting lodge, and in about twenty minutes we were thoroughly warmed before a great log fire in a huge fireplace. Then the dinner gong was sounded, and we sat down to a meal of planked moose steaks, with all the trimming from soup to nuts. That meal is another memory. The moose meat had been furnished by Dr. W. D. Sinclair, surgeon of the Chichigoff Mines, who'd come over from Chichigoff Island with a fifteen-foot boat and an outboard motor, for a week of moose hunting along Taku River. He'd brought in 1,200 pounds of moose meat that morning. The remaining guests of the camp were two reputed

This scene was taken on the northern part of Vancouver Island at a camp site where we were fortunate enough to find a piece of civilized wood, which was utilized as a dining table

Our camping outfit was reduced by the last possible ounce. For food we relied chiefly upon fishhooks and firearms, carrying only a small supply of staples



Running through the fog until nightfall and running straight into a lovely cove a few miles south of the town of Sydney

millionaires from Tennessee. They claimed to be hunters, but in a month's stay around the camp they had killed nothing but about six cases of bourbon and gin that they'd brought down out of Canada—making the journey by canoe down Taku River from Atlin Lake. The Colonel, who seemed to be the big money bag of this precious pair, wasn't a half bad sort of fellow. He broke out a square-face of bonded bourbon, and after sampling it, we were ready to concede that these mighty hunters were probably enjoying life in their own way.

The Taku River country is perhaps about as nearly the sportsman's idea of paradise as

(*Continued on page* 126)

In Wrangel Narrows there is 15 fathoms under Ikigihk at low tide. The rocks are covered at high tide

The small boat with a mechanical kicker is as essential to the Alaskan family as the flivver is to the American farmer

By Waters to GOTHAM

By LEWIS R. FREEMAN

Part III

Coasting Green Bay

The adventurous cruise story which began several months back in MoToR BoatinG is continued this month with further interesting and exciting details. Mr. Freeman has embarked in an 18-foot row boat on a voyage from Milwaukee to New York, the boat being driven solely by an Elto outboard engine. For the first few days of the trip a companion traveled along in the boat. In this part the voyage is continued single-handed and many exciting adventures are experienced and recorded in the story

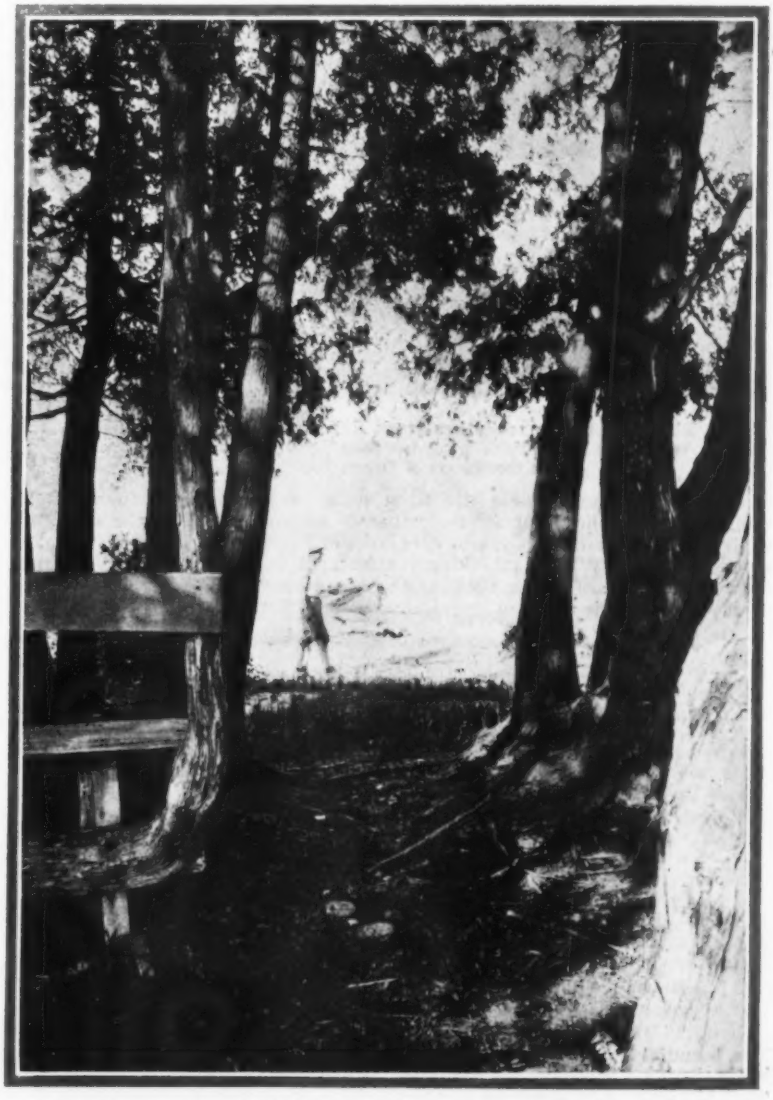
Green Bay, just off Death's Door. This narrow passage narrows the entrance to the waters of Green Bay. It received its name from an Indian legend wherein a great fleet of Indian war canoes were wrecked in a heavy storm while moving from the mainland to one of the islands nearby

THE storm which had been thundering to the west all day of June eleventh discharged most of its venom during the night. The worst of it fell along the southern shores of the lake. Several violent squalls broke upon Two Rivers, but found our boat snugly covered on the slip of the Coast Guard station and ourselves equally immune under the roof of the boat-house. The weather in the morning, while far from settled, looked hardly threatening enough to keep port for. The twenty-five mile run to Kewaunee was made in just over three hours. Cutting my course too fine in passing broad, rounding Rawley Point, I found myself in a nest of shoals, with several vicious fangs of rocks pushed up to within a foot or two of the surface. The breeze was too light to reveal these with broken water and the light too dull to make them visible more than a couple of boat lengths away. After nicking one of these with the propeller (fortunately without injuring it), I tilted the motor and threaded my way out of the maze under oars. This was the first of many occasions on which the automatic tilting of the motor saved it from serious damage. Subsequent collisions were responsible for the shearing of many propeller pins, but never for the loss of the wheel itself.

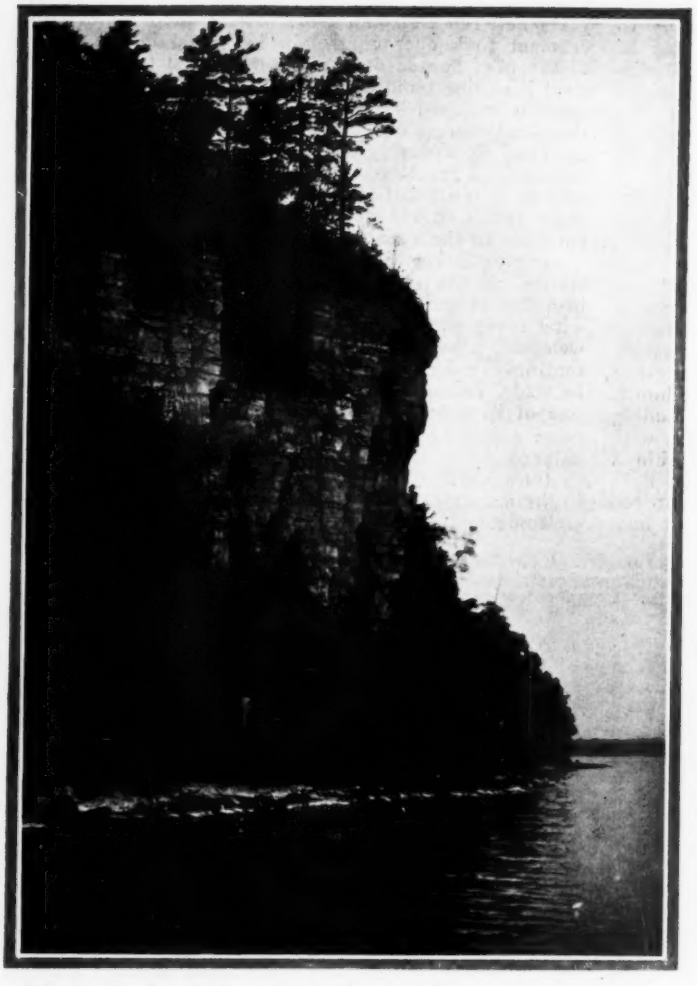
The Kewaunee Coast Guard station had a forecast of thunder showers for the afternoon, but the Captain was inclined to believe they would not be severe to the north. He warned us especially of barely covered shoals along the shore and advised keeping out from two to three miles the first quarter of the way to the lake entrance of the Sturgeon Bay Canal, our next objective. Just how troublesome these shoals would prove in the event of a forced landing we did not, fortunately, have a chance to find out. A drizzling rain from leaden skies rather than thunder squalls prevailed most of the afternoon, so that there was no occasion to deviate from an outside course in deep water. The beach showed more rocks and less sand the farther north we fared, and just before reaching the Canal a ridge of white limestone appeared, the forerunner of the beautiful cliffs fringing most of Green Bay and the islands about its mouth.

The course we were about to follow through Sturgeon Bay Canal and north along the eastern shores of Green Bay was considerably longer than the direct one up the outside of the peninsula. It had been universally recommended to us, however, both because it was better protected and because it ran through some of the most beautiful waters of the Great Lakes. The slender easterly reaching finger of Sturgeon Bay cuts five-sixths of the distance through the narrow peninsula separating Green Bay from the main lake, so that a shallow excavation of 7,200 feet was all that was needed to unite the waters. This was done by a private company during the years between 1872 and 1881. The United States Government took over control in 1893, and in the course of the next decade deepened it to fifteen feet and widened it to one hundred and sixty. The lake end of the canal is enclosed by two converging piers, each over a thousand feet in length, forming a stilling basin that is called by courtesy a Harbor of Refuge. The area enclosed, as the War Department Bulletin describing it admits, is too small to be of any value as a refuge for ships and is of use only in affording protection to the entrance to the canal.

Running in between the piers toward the Coast Guard station on the north bank of the canal, we observed, in a line of uniformed men forming up along the wall, what appeared to be the preparations for our first formal welcome. Assuming that some kind of an address presenting us with the Freedom of the Canal was about to be made, Tellander and I fell into hot debate as to which one of us should have the pleasure of listening to the other make the response. The decision was still in the balance when we bumped alongside, quickly to learn that we had been giving ourselves unnecessary concern in the matter of a response to a speech of welcome. The welcome had been carefully prepared, it is true, but it



Looking out through birches and cedars to our landing at Shanty Bay



Eagle Bluff, one of the rocky headlands flying along the rocky bluffs of the Wisconsin State Park lying between Ephraim and Fish Creek on the waters of Green Bay

was a negative one, taking the form of a rough and undignified tumbling out of the contents of our boat while a very dour-faced Captain checked the items from a yellow paper. When I, thinking the search was possibly a routine one of motor boats at the canal, interposed to say that all government requirements in the matter of life-preservers, fire-extinguisher and the like had been complied with, I was told bluntly that I would be given a chance to make a statement in due course; also that I might just as well be warned that anything I said would be held against me.

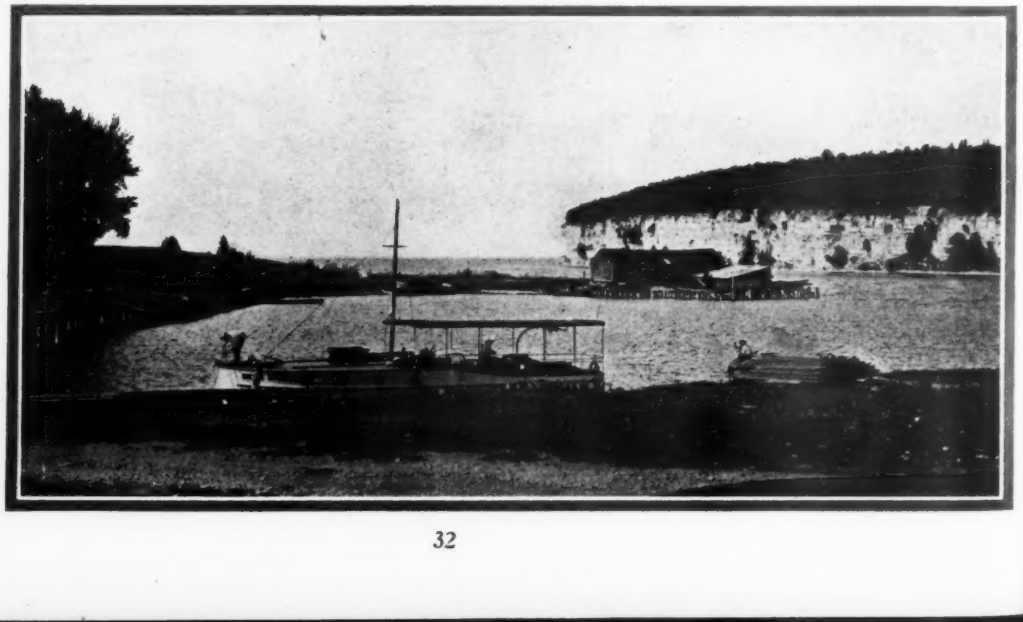
That cleared things up a bit respecting the lack of warmth in the welcome, so that I was not so much surprised when the Captain and the searchers, shaking their heads ominously, agreed with each other that "this sure looks like the outfit." Evidently having learned all that was necessary, the half dozen big, strapping guardsmen formed a circle about us, handed me the yellow paper and demanded to know what we had to say to that. And the yellow paper cleared up everything. It was a police wire from Manitowoc asking all Coast Guard stations to be on the lookout for a gray, eighteen-foot, round-bottomed boat, fitted with lockers forward, which had been stolen by two men the previous day. There was also a list of things that had been taken with the boat, and, without giving the items in detail, I may say that we had them all, even to a collapsible canvas bucket marked U. S.

The identification appeared so complete that I could quite understand how our captors assumed the airs that would go with the feeling that there was nothing left to do but deliver up the prisoners and collect the reward. If they were surprised at the highly amused grins that sat upon the phizzes of the captives, it was nothing to the way they were caught a-back when I passed the Captain a copy of the Milwaukee paper with an account of our departure and a picture of the outfit in the river and at the Yacht Club. The best of it was that he had a copy of the same paper in his pocket, together with memoranda of phone messages from Coast Guard stations to the south asking him to be on the watch for us.

Fortunately the Captain was of Irish extraction, and so able to derive some enjoyment out of a joke on himself.

"They can't be saying I didn't keep a watch out for ye after all, bhoys," he exclaimed, clouting us both on the shoulder with a weighty paw. Then, with a flush of red around the fresh-shaven gill, "But I'd be appreciating it, just the same, if nayther of ye beat it to the phone to tell 'em just what kind of a watch it was I kept."

(*Continued on page* 144)



The beautiful little harbor of Fayette, Michigan, on Green Bay

Lock and Dam No. 2, also electric power plant from hill north of Trenton in the Trent River just after leaving Lake Ontario

Through *the* TRENT CANAL

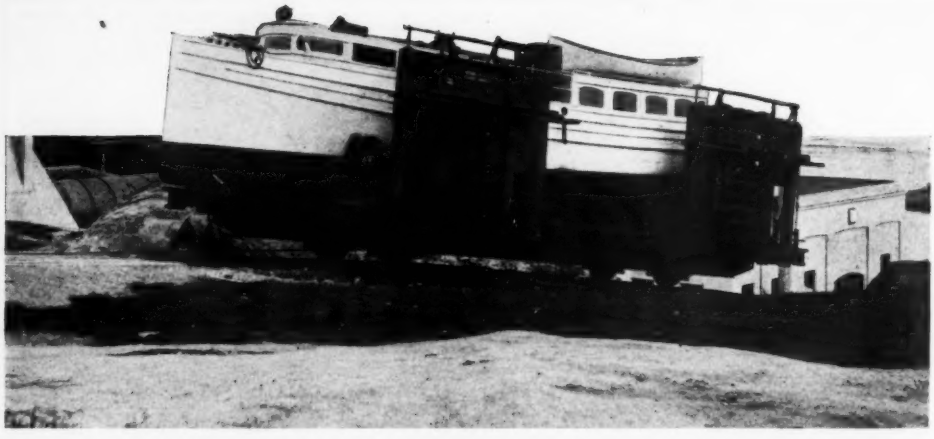
Picturesque Cruise Through Canada's Greatest Inland Waterway Amid Islands, Lakes and Gorgeous Mountains

By *R. H. Combs*

LAST fall when I took my trip through the Trent Valley Canal and the Kawartha-Scugog chain of lakes, the thing that worried me was just why I had waited seven years before making this trip. You know, there is something that needs explaining about this, as I had been spending considerable of each successive year boating and fishing around Rice Lake, the southernmost of the Kawartha chain, so, for the present I shall dismiss my reasons for sticking to Rice Lake and the lower reaches of the Otonabee River by blaming it on business, and come to think of it, it was really business that caused me to take the trip, as Red Bird I had served me well for two seasons, and while she was a wonderful little boat, she was a round bottom craft, which means that there was no way of getting more speed out of her by piling engines into her, and my deal with Ditchburn Boats at Gravenhurst for a new V-bottom 26-footer with a Sterling Seagull motor, included delivery by me of Red Bird I to Mr. Ditchburn at Severn Bridge on the Severn River, about ten miles from Gravenhurst, so that the chronicle of this trip through the most delightful motor boating water I have ever seen in my experience—a distance of about 117 miles—is really the story of a commercial trip rather than an out-and-out pleasure trip.

After having cruised thousands of miles through the waters of the Mississippi River and its tributaries and Lake Michigan and the Detroit River, to say nothing of many of the Eastern waterways inside and outside the Atlantic Coast, I think that a trip through this inland waterway of Canada in either direction between Lake Ontario and the Georgian Bay is one of the finest trips, especially for the moderate size motor boat or cruiser, that can be found anywhere in North America.

On this particular trip I did not start at Lake Ontario nor did I go through to the Georgian Bay, but I expect

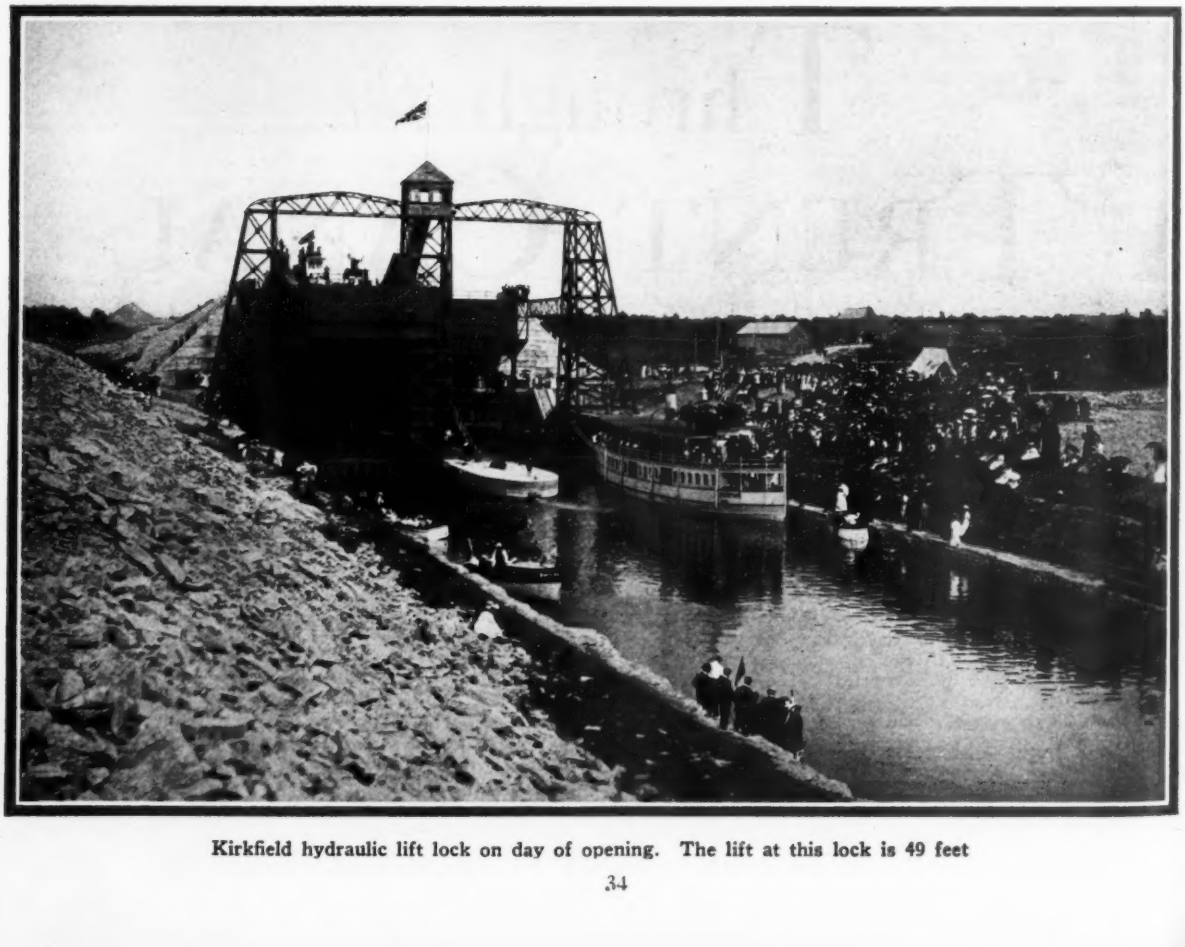


Marine railway car at Big Chute, Severn River, carrying motor boat from lower to upper level

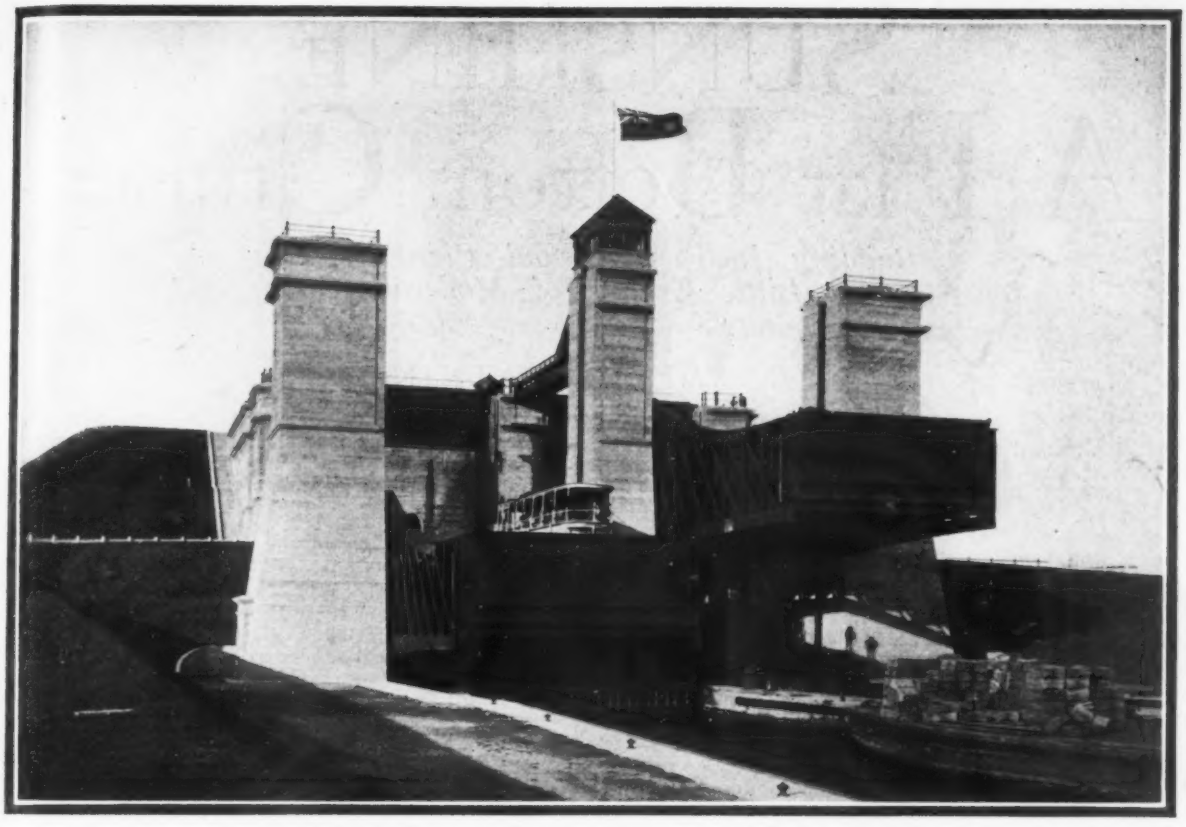
to make the entire trip this summer. We started at Gore's Landing on the morning of Saturday, September sixth just a couple of ticks after 7 o'clock. (Red Bird I is 26 feet long, 6 feet beam, a solid mahogany Ditchburn runabout, powered with a 32-40 Redwing motor, and capable in deep water of 22 miles per hour.) When we left Gore's Landing (we, meaning Dan McAllister, pilot and guide of these waters, known from Lake Ontario to Georgian Bay, by every trapper, guide, lock-master and steamboat man, as a hale fellow well met, and myself), low grey clouds, driven by a northwest wind, were scurrying across the lake, and a little sea was running, but we paid no attention to this but opened up the engine and about two-thirds of the way across the lake evidently wound up a few pounds of moss and weeds on our propeller. We reversed the wheel a couple of times and figured we were clear, but as it took us some 70 minutes to get to Peterboro, a distance of 21 miles, we made some investigation while in lock 19 and removed enough weeds to have made a greater difference in our speed.

Of these 21 miles, almost 19 were in the beautiful Otonabee River, the home of millions of gamey black bass, of both large and small mouth variety. There is no appreciable current in the Otonabee and the channel has a minimum of 6½ to 7 feet in shallow places, but generally the water is 14 feet or deeper. This river is also inhabited by myriads of muskalonge, running as high as twenty-six pounds in weight, and wall-eyed pike, known in these waters as pickerel, some ten pounds in weight.

Passing through lock 19 out of the lower stretches of the Otonabee River, we entered Little Lake, a small lake on which the city docks (City of Peterboro, Ont.) are located. Peterboro is a city of 21,000 and is the home of several industrial firms, some of these being the Canadian General Electric, De Laval Company and the Quaker Oats Company.



Kirkfield hydraulic lift lock on day of opening. The lift at this lock is 49 feet



Hydraulic lift lock at Peterboro. The lift at this lock is 65 feet. The steamer in the lock chamber is 90 feet long and 16 feet wide

We cross Little Lake and pass through lock 20 in the canal, which connects Little Lake with the upper reaches of the Otonabee above Peterboro, and above the rapids of the Otonabee at Peterboro. The upper level of this canal above lock 20 leads us into the famous Peterboro Lift Lock, which is known as lock 21. This lift lock has two chambers 139 feet long and 33 feet wide, and these chambers are filled with water, into which the boat enters. The gates are closed and the chamber, water and boat are lifted 65 feet to the upper level. This lock is operated by hydraulic power, the rams under the center of the chambers having a diameter of 7 feet 6 inches. The towers, which act as guides for the chambers as they go up and down, have a height of 100 feet above solid rock. In this lock there are over 26,000 cubic yards of concrete and 1,400 tons of metal work; the weight of the water in one of these chambers, or the total of the load in the chamber in case part of the water is displaced by a boat, is 1,140 tons. (The accompanying photograph hardly does justice to the immensity of this lock.)

On arriving at the upper level on the lift lock, we navigate about one mile through the canal and then through the open waters of the Otonabee, and then in rapid succession pass through locks 22, 23, 24 and 25—these four locks all appearing within 3 miles, and 1½ miles farther we enter the Lakefield Lock, 26, at the town of Lakefield. When we cleared lock 26, the clouds had become heavier and the wind had increased its velocity, and the sun, which had been peeping out at us now and again, had deserted us, and it looked as if we were in for a bad day. However, up to this time we had not put up the top on the boat, as there had been very little rain, but on arriving at lock 27, at Young's Point at the lower end of Stoney Lake and five miles from Lakefield, it looked like a case of putting up the top, as much as we dreaded this; but by the time we had cleared lock 27 the shower passed on and the sun took a look at us, so we went on through the beautiful islands and the granite rocks of Stony Lake, which reminds one of the lovely Muskokas, as nearly every rock is crowned with a fine summer villa or residence of some sort. The channel between these rocks lacked a good deal of being straight, and passing through this lake one would need to know exactly where he was going, as through the clear water he could look down and see

(*Continued on page 88*)

Something Extra Fine Next Month

A surprise awaits MoToR BoatinG's readers, as we have secured a marvelous story of a cruise through the waters of Georgian Bay. H. G. Mitchell, the author and artist, has illustrated his article with some exceptionally fine pen and ink drawings which will be reproduced in MoToR BoatinG's best style. His description of camp sites and the remarkable game fishing to be had along the route will make you itch to get out in the open spaces and really enjoy life. He will take you through a maze of islands, thirty thousand of which have already been surveyed by the Canadian Government, while countless numbers still remain to be registered.. The crystal clear waters are so marvelous that one can see bottom at forty feet. All around you are the wonders of nature, fruit, game, and fish all waiting to be taken by the visitor to this remarkable land. Watch for this article next month.—Editor.

SUNSHINE
A Flat Bottom Cruiser

Building Instructions and Plans for a Smart Little Cruiser of Moderate Cost

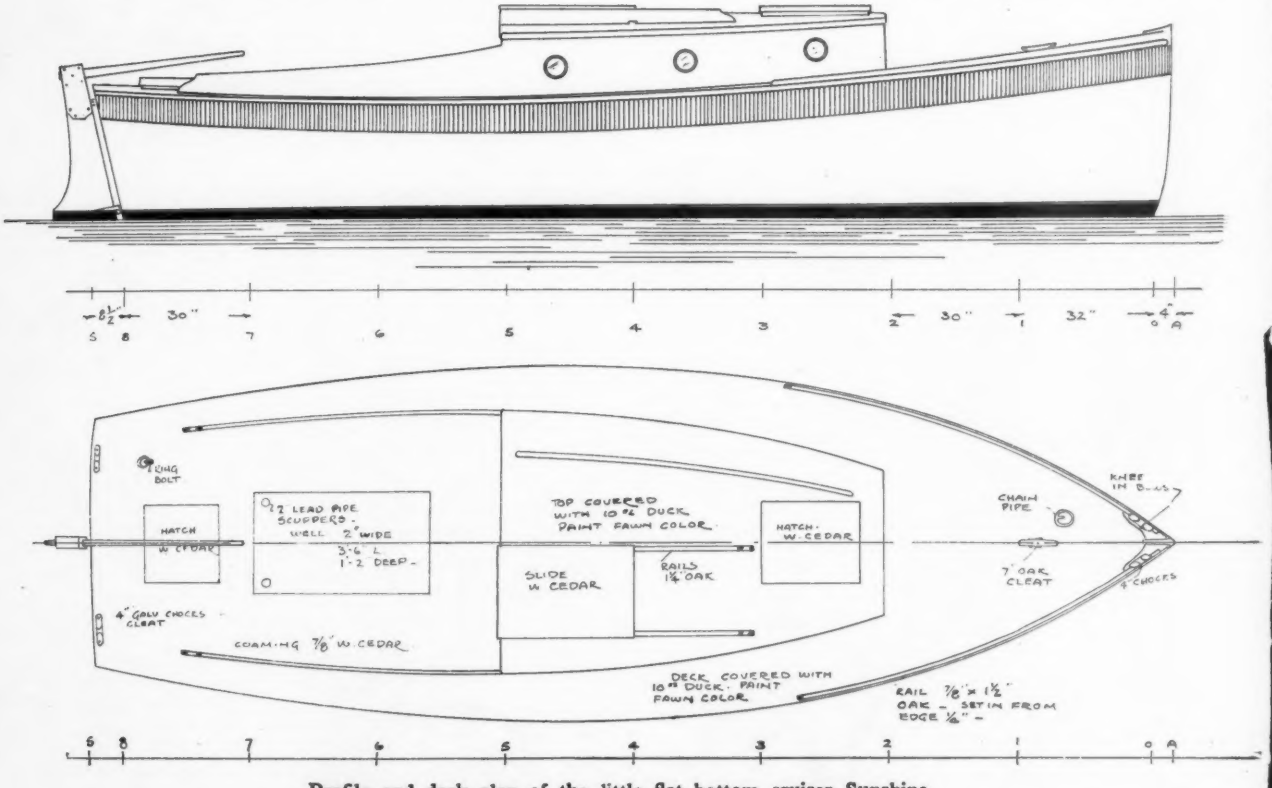
Designed Exclusively for MoToR BoatinG

By WILLIAM ATKIN

IT SEEMS a long time now since my old friend Al Kellar asked me to design him a flat bottom cruising boat, and as I think of it, it is a long time and a great deal of water has passed over my weir of experience since. Al, it seems, had come across a sketch of mine somewhere or other and wanted a 24-footer like it. I never could understand why my friend wanted so plebeian a craft as a flat bottom boat, in view of the fact that he is an automotive engineer connected with the Pierce-Arrow motor car concern. But Al has been flirting with boats for a long, long time, and his association with the production of so excellent and elegant a thing as a Pierce-Arrow motor car had not turned his head (this kind of thing has been known to turn folks' heads), and so we closed the bargain and designed the boat, or as they used to call this kind of craft down the lower bay, the bateau, for my friend is a practical kind of man and wanted an easy boat to build, and one that would not be too costly.

The next thing I knew the boat had been built, used for one summer's fun, and sold at a profit. I learned from her builder that she was a fine little craft in all but one respect: she fell down badly in a short head sea. She was not unsafe or unstable, but uncomfortable in this one respect. I attribute this fault to several things, the first of these being that the boat was too wide on the bottom and not deep enough in the forefoot; she was heavy, having been built entirely of yellow pine; and she was too fast for a boat of her type and model. Since the designing of Mr. Kellar's 24-footer I have turned out five others, trying in successive creations to eliminate the bad features of this kind of craft. It would be rather tiresome to tell about these in detail; but of one thing I am glad: the latest of the fleet has always been a little better than its immediate predecessor and I am sure that Sunshine is a lot better than them all. That is the advantage of experience in matters of this kind.

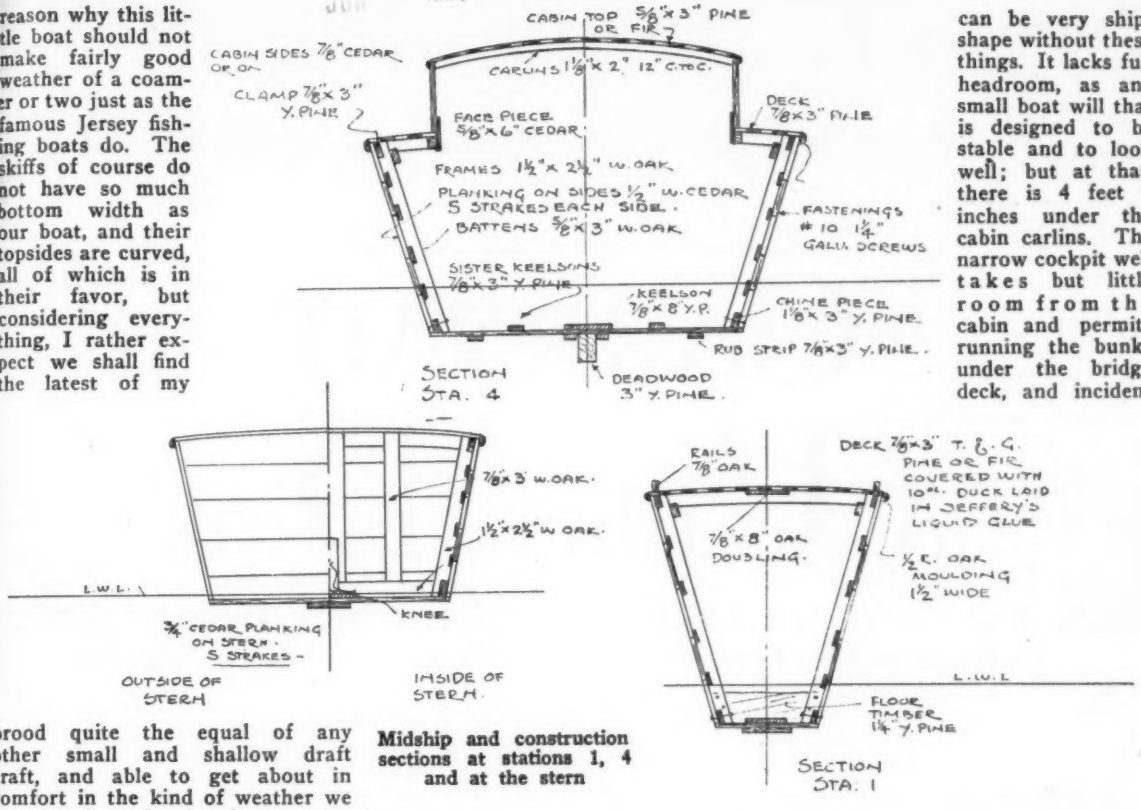
Thus the dimensions of Sunshine are in good proportion without going into excess one way or the other. I might have gained more room inside by adding to the beam, but with the sacrifice of the narrow bottom. But the narrow bottom is much to be desired and I wanted it so that this, the sixth of the family, will buck a head sea without shaking out the crew's teeth. All genuine Seabright skiffs have a flat bottom, but it is narrow, not unlike our cruiser's, and I therefore can see no



Profile and deck plan of the little flat bottom cruiser Sunshine

MUTILATION NOISE
JUN 1934

reason why this little boat should not make fairly good weather of a coamer or two just as the famous Jersey fishing boats do. The skiffs of course do not have so much bottom width as our boat, and their topsides are curved, all of which is in their favor, but considering everything, I rather expect we shall find the latest of my brood quite the equal of any other small and shallow draft craft, and able to get about in comfort in the kind of weather we have during the boating season.


CABIN TOP 5/8"x3" PINE OR FIR
CABIN SIDES 7/8" CEDAR OR OA
CLAMP 7/8"x3" Y. PINE
CARLINS 1 1/8"x 2" 12" C.TO.C.
FACE PIECE 5/8"x6" CEDAR
DECK 7/8x3" PINE
FRAMES 1 1/2"x 2 1/2" W.OAK
PLANKING ON SIDES 1/2" W.CEDAR 5 STRAKES EACH SIDE.
BATTENS 5/8"x3" W.OAK
FASTENINGS #10 1 1/4" GALV. SCREWS
SISTER KEELSONS 7/8"x3" Y. PINE
KEELSON 7/8"x8" Y.P.
CHINE PIECE 1 1/8"x3" Y. PINE.
RUB STRIP 7/8"x3" Y. PINE.
DEADWOOD 3" Y. PINE.
SECTION STA. 4
7/8"x3" W.OAK.
1 1/2"x2 1/2" W. OAK.
L.W.L.
KNEE.
3/4" CEDAR PLANKING ON STERN. 5 STRAKES.
OUTSIDE OF STERN
INSIDE OF STERN.
RAILS 7/8" OAK
DECK 7/8"x3" T. & G. PINE OR FIR COVERED WITH 10oz. DUCK LAID IN JEFFERY'S LIQUID GLUE
7/8"x8" OAK DOUBLING.
1/2 R. OAK MOULDING 1 1/2" WIDE
L.W.L.
FLOOR TIMBER 1 1/4" Y. PINE
SECTION STA. 1

Midship and construction sections at stations 1, 4 and at the stern

can be very shipshape without these things. It lacks full headroom, as any small boat will that is designed to be stable and to look well; but at that, there is 4 feet 6 inches under the cabin carlins. The narrow cockpit well takes but little room from the cabin and permits running the bunks under the bridge deck, and incidentally gives plenty of room around the motor. There is room under here, too, for two clothes lockers, as well as the fuel tanks. Two people who sail in a little boat like Sunshine must be on intimate terms, and for this reason a separate toilet room is not necessary. With the toilet installed under the fore ends of the bunks and covered with a cushion like the rest of the space forward, the space it occupies can be used for a seat while cooking and washing up after meals. I have a small sloop which is arranged in this way and it is very satisfactory. There is room in the bow for chain locker, shelves, and stowage as shown. There is also a shelf over the bunks, and of course locker space under them. There is a folding table forward of the stove with lockers over it and food lockers on the starboard hand of the galley part of the boat. The hatch in the after deck gives access to space that can be used for keeping sailing lights, oil tins, spare anchor and the other gear that one must have on a boat.

Anyway, I have learned long ago that few cruisers lead to remote parts; most of our cruising is done close to home and even then we pick the weather, which, after all, is very good sense. It is my belief and expectation that Sunshine will make an excellent small boat in which two can live in comfort and peace. There is room below for luggage, and food; for blankets and fuel; for cooking and sleeping; and for ground tackle and supplies. And what is equally as important, there is room on deck to handle the boat in any emergency, the latter being a feature sadly lacking in about 90 per cent of the motor cruisers built. There is room everywhere and one does not have to be an acrobat to go forward to raise the anchor, or aft to cast off a line.

The boat was not designed for a big party, rather for two, which accounts for the cockpit arrangement and the layout inside. She was designed with a view to produce a boat that can be built with a minimum of money, and withal be a good boat. All inessentials have been left out, like the steering wheel, standing top, bronze deck hardware, varnished woods, etc. After all, a boat

There is a wide selection of motors for Sunshine. The plans show one of the high-speed four-cylinder machines

(*Continued on page* 140)

TABLE OFFSETS - - - 21-2½ FLAT BOTTOM CRUISER

STATION	A	O	1	2	3	4	5	6	7	8	9
HEIGHTS											
L W L TO SHEER	3-6		3-1¼	2-5¾	2-6⅞	2-5	2-4	2-3¾	2-4¼	2-5⅞	2-6¼
SHEER TO BOTTOM OF WALES	0-8¼		0-8⅜	0-8⅜	0-8⅜	0-8⅜	0-8	0-7½	0-6⅞	0-6½	
" TO HOUSE SIDE				1-1	1-2	1-3	1-3¼				
HOUSE SIDE TO CROWN				0-1	0-2¾	0 3½	0-4				
BASE TO BOTTOM			1-2	1-0¾	1-0½	1-0½	1-1⅛	1-3	1-5½	1-9	
" " KEEL			1-1¼	0-11½	-	STRAIGHT -		0 5	0-8	1-8¼	
HALF BREADTHS -											
DECK	0-0⅜	0-4	1-10	2-9	3-2½	3-5⅛	3-5¼	3-3½	3-0	2-6¾	2-5¼
CHINE	0-0⅜	0-0⅜	0-9½	1-6	2-0⅞	2-5⅜	2-8⅜	2-8¼	2-5¼	2-0	

Table of offsets, containing all necessary figures for laying out the cruiser Sunshine

The outboard profile of the handy little utility dinghy, Carryme

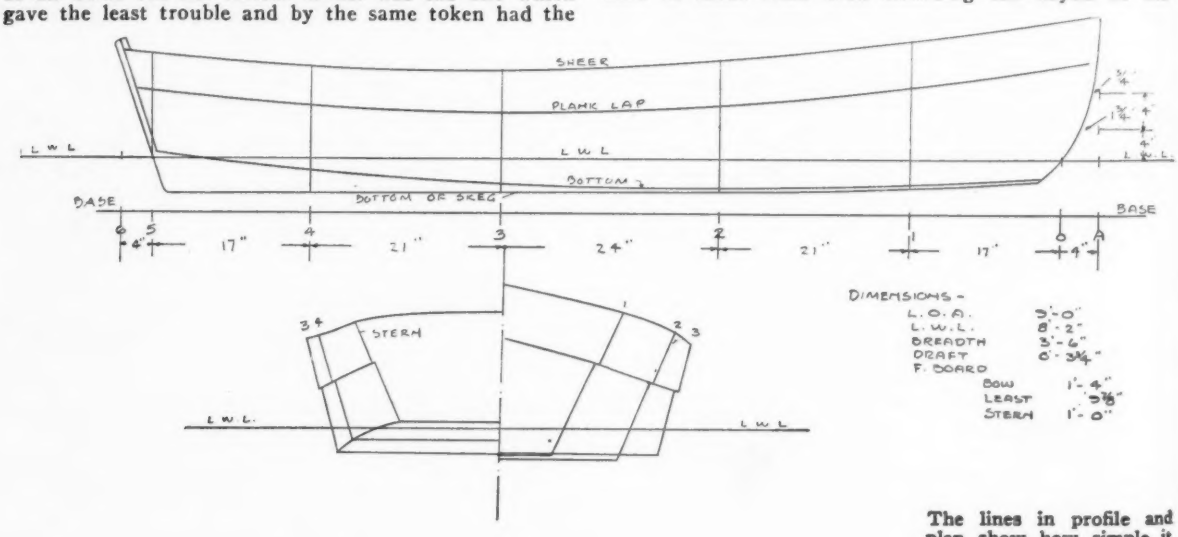
CARRYME
A Utility Dink

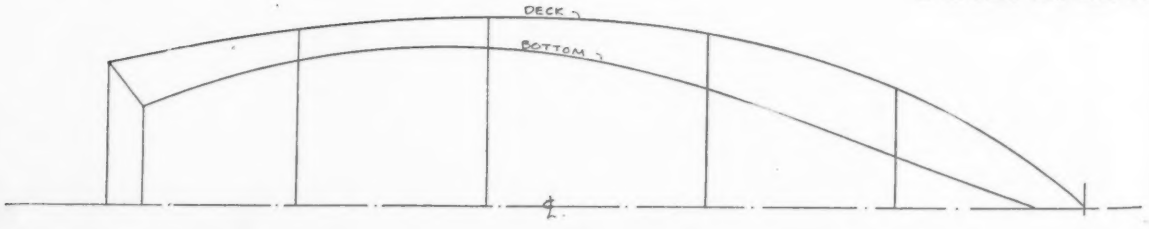
Every Boat Can Use an Additional Dinghy, and When They Are as Simple to Build as This One, There Is No Excuse for Not Having One

Designed Especially for MoToR BoatinG

By *WILLIAM ATKIN*

SOMEONE wrote me a few days ago and remarked that a dink of any kind was a nuisance whichever way one looked at her; and in a measure he is right, especially if it becomes necessary to carry the said dink on deck. My correspondent felt, though, that of all dinks the flat-bottom model was the one which gave the least trouble and by the same token had the greatest number of good points. All yachtsmen are not of the same mind, however. Some prefer the round bilge lapped strake type, others the dory type, still others, the punt, the pram, the V-bottom, the canvas-covered dink, and so on through the whole list of every possible kind of small craft even including the kayak of the





The lines in profile and plan show how simple it is to build this little boat

eskimo and the coracal of the Euphrates. I suppose that any kind of dink is better than none at all, which probably accounts for the disreputable looking small boat so often seen at the end of the tow line of a natty motor cruiser. Seems odd to me why it is that so many owners will invest several thousand dollars in a cruiser, then slick her up ship shape and Bristol fashion, only to ruin the ensemble with a wretched looking dink made fast with a frayed-out painter. All quite suggestive of a man well dressed, with the exception of a pair of worn-to-the-uppers boots.

Excellent dinks can be bought for as little as $40.00 and, better still, one can be built at home for even less than this. Nor is the work difficult or heavy. I have seen so many small boats built and building by amateur workers, and some of these in the oddest places, that I am sure that anyone who is handy with carpenters' tools can build a good serviceable boat. There is no secret about the thing, no great strength needed, no elaborate layout of tools—just a little common sense, a rip saw, cross-cut saw, several chisels, small plane, hammer, brace, hand drill with some augers and drills. That is about all.

TABLE OF OFFSETS — LINES TO OUTSIDE PLANK.

STATION	A	O	1	2	3	4	5	5
HEIGHTS.								
SHEER TO L W L	1-4	1-3¼	1-1	0-11	0-9⅜	1-0¼	0-11½	0-12
PLANK LAP TO L W L	0-10	0-9⅜	0-7	0-5	0-4⅛	0-5⅛	0-7½	
BOTTOM TO BASE			0-3¼	0-2¾	0-3¼	0-4⅜	0-6¾	
SKEG TO BASE				0-2⅛	0-2¼	0-2⅛		
HALF BREADTHS								
DECK -	0-0¼	0-3¼	1-1¼	1-7⅞	1-8¾	1-7½	1-4¾	1-3½
CHINE		0-0¼	0-5¾	1-1⅛	1-5⅝	1-4	0-10⅜	

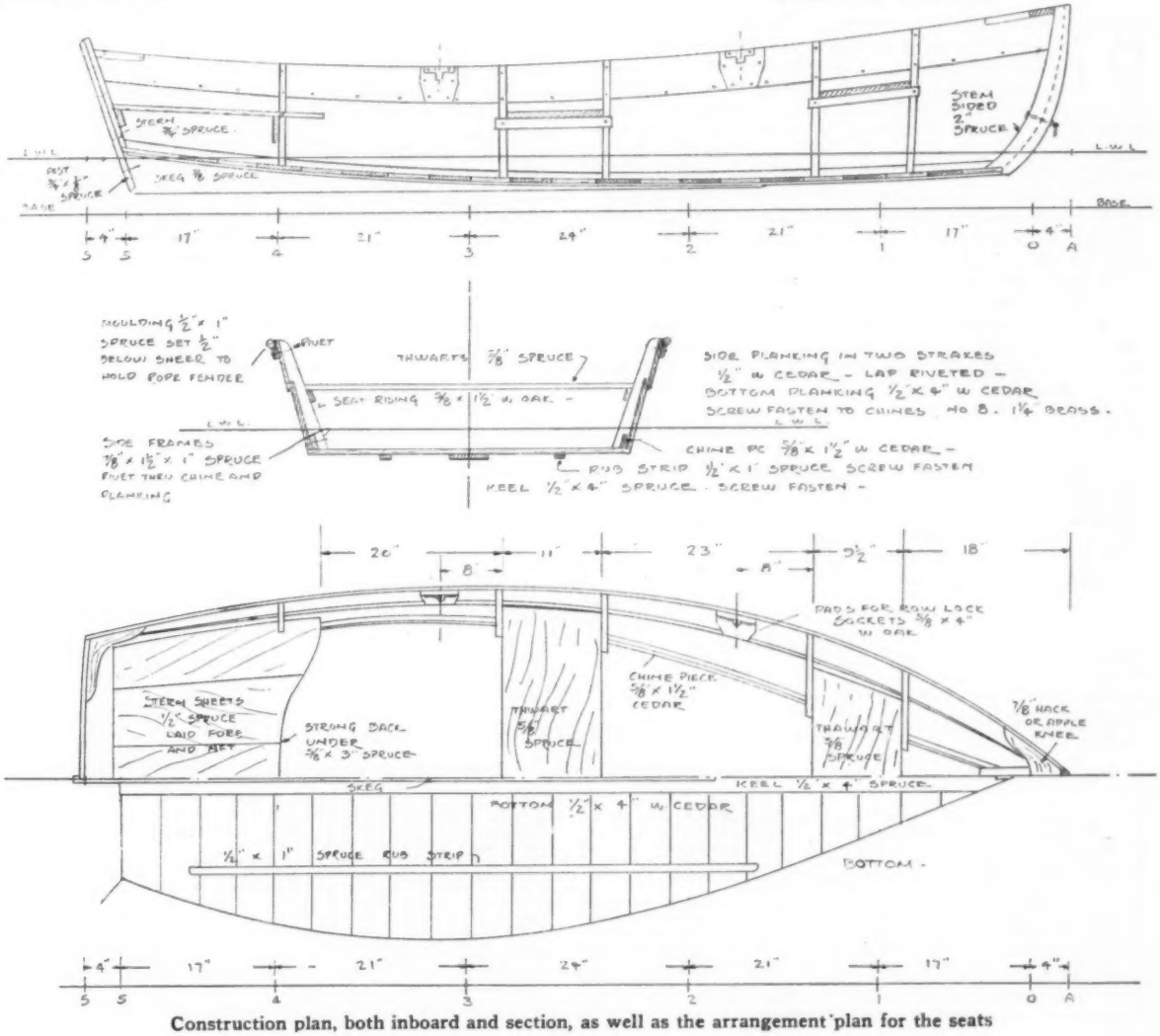
DIMENSIONS IN FEET AND INCHES —

Table of offsets which gives in tabular form all of the necessary dimensions for laying out the boat

Of course there are flat-bottom dinks, and flat-bottom dinks—some of these being excellent kind of craft; others not so good. The bad feature of most dinks is that they are too heavy, and this applies especially to the flat-bottom kind. Another bad feature in a flat-bottom boat of any kind is lack of flare to the top sides. I have noticed that skiffs which have a broad bottom and nearly perpendicular sides are very cranky, and very wet as well, if rowed in choppy water.

In Carryme, the nine-foot dink shown here, the weight of all scantlings has been kept down to the minimum and the construction is simplified so as to eliminate every unnecessary part. She will not weigh over 80 pounds when completed, which is not bad at all. Nine feet of length seems to be about the inside limit for a skiff nor can the width be cut to much under the 3 feet 6 inches shown on the plans. A boat of this kind has ample capacity for two and will carry three with a good margin of safety. She will row easily and tow well. There is enough freeboard for comfort, and still is not so deep as to be dreadfully in the way when turned bottom-side up on deck.

(Continued on page 79)


STEM ⅞" SPRUCE
STEM SIDED 2" SPRUCE
L W L
POST ⅞" SPRUCE
SKEG ⅞ SPRUCE
BASE
4" 17" 21" 29" 21" 17" 4"
5 5 4 3 2 1 0 A
MOULDING ½" x 1" SPRUCE SET ½" BELOW SHEER TO HOLD ROPE FENDER
RIVET
THWARTS ⅞" SPRUCE
SIDE PLANKING IN TWO STRAKES ½" W CEDAR - LAP RIVETED - BOTTOM PLANKING ½" X 4" W CEDAR SCREW FASTEN TO CHINES NO 8 - 1¼" BRASS.
SEAT RISING ⅞" x 1½" W OAK
SIDE FRAMES ⅞" x 1½" x 1" SPRUCE RIVET THRU CHINE AND PLANKING
CHINE PC ⅞" X 1½" W CEDAR
RUB STRIP ½" X 1" SPRUCE SCREW FASTEN
KEEL ½" X 4" SPRUCE - SCREW FASTEN
20" 11" 23" 5½" 18"
B A
PADS FOR ROW LOCK SOCKETS ⅝" x 4" W OAK
STERN SHEETS ½" SPRUCE LAID FORE AND AFT
STRONG BACK UNDER ⅝" x 3" SPRUCE
THWART ⅝" SPRUCE
CHIME PIECE ⅞" X 1½" CEDAR
THWART ⅝" SPRUCE
⅞" HACK OR APPLE KNEE
SKEG
KEEL ½" x 4" SPRUCE
BOTTOM ½" x 4" W CEDAR
½" x 1" SPRUCE RUB STRIP
BOTTOM -
4" 17" 21" 29" 21" 17" 4"
5 5 4 3 2 1 0 A

Construction plan, both inboard and section, as well as the arrangement plan for the seats

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A Monthly Prize Contest Conducted by Motor Boatmen

Questions Submitted for the August Prize Contest

1. Describe and illustrate the construction of a marine railway to permit easy hauling out of small boats.
(Submitted by S. E. McG., Fresno, Calif.)

2. Describe and illustrate a device for heating water for cooking purposes that utilizes the exhaust gases or hot water from the circulating system in its operation
(Submitted by H. G. L., Baltimore, Md.)

Keeping Carbon Deposits Down

Causes and Remedies for the Most Annoying of Gas Engine Ailments Discussed with Suggestions for Relieving the Difficulty

Answers to the Following Question Published in the April Issue

"What have you found to be the best method of keeping carbon deposits in the motor to a minimum, without sacrificing any efficiency or power?"

Keeping Carbon Down

(The Prize-Winning Answer)

BEFORE suggesting a remedy, let us first look into the most common causes of carbon formation in the marine engines. These can be classed as follows: 1, Leaky piston rings; 2, over-feeding lubricating oil; 3, imperfect carburetion; 4, running motor too cool; 5, oil of improper consistency or poor quality; 6, prolonged running of motor at very low speed. Leaky piston rings are probably the most common cause of excessive carbon formation. The partial vacuum in the combustion chamber during the intake or suction stroke drawing lubricating oil into the firing space where partial combustion produces carbon deposits. New properly fitted rings will not only reduce carbon formation, but will also increase power in this case.

Over-feeding lubricating oil will probably not affect the modern motors using splash or force feed systems, but the older gravity type lubricating system is a good carbon producer if the oil is fed in too large quantities.

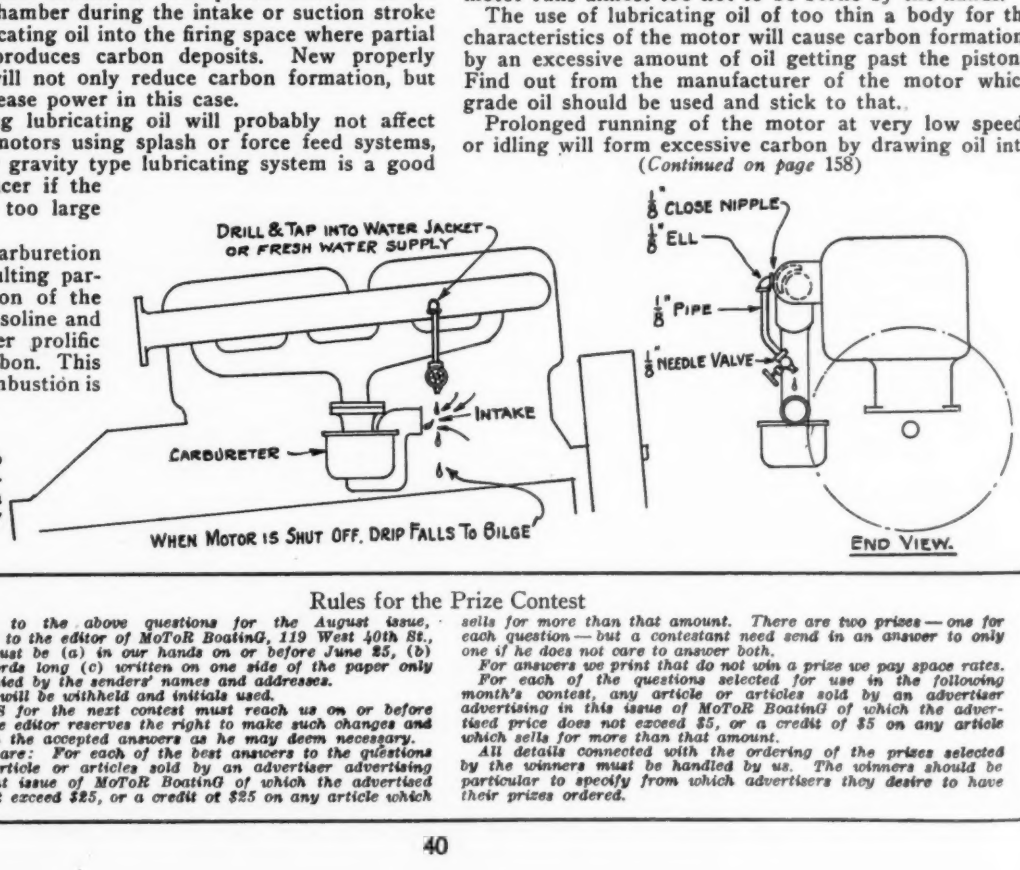
Imperfect carburetion with the resulting partial combustion of the mixture of gasoline and air is another prolific source of carbon. This imperfect combustion is similar to the conditions set up in a smoking oil lamp and the resulting formation of soot. Adjusting the mixture to give the sharpest explosion and the maximum revolutions is the remedy for this. The flame seen through the open pet cock should be a blue white and not a reddish blue. The latter color indicates too much gasoline or too little air in the mixture.

Running the motor too cool has the effect of preventing complete combustion of the charge directly in contact with cylinder walls. Regulate the amount of circulating water passing through the jackets until the motor runs almost too hot to be borne by the hands.

The use of lubricating oil of too thin a body for the characteristics of the motor will cause carbon formations by an excessive amount of oil getting past the pistons. Find out from the manufacturer of the motor which grade oil should be used and stick to that.

Prolonged running of the motor at very low speeds or idling will form excessive carbon by drawing oil into

(*Continued on page* 158)



The water drip device for eliminating carbon suggested by W. E. M.

Rules for the Prize Contest

ANSWERS to the above questions for the August issue, addressed to the editor of MoToR BoatinG, 119 West 40th St., New York, must be (a) in our hands on or before June 25, (b) about 500 words long (c) written on one side of the paper only (d) accompanied by the senders' names and addresses.

The names will be withheld and initials used.

QUESTIONS for the next contest must reach us on or before June 10. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

The prizes are: For each of the best answers to the questions above, any article or articles sold by an advertiser advertising in the current issue of MoToR BoatinG of which the advertised price does not exceed $25, or a credit of $25 on any article which sells for more than that amount. There are two prizes — one for each question — but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of MoToR BoatinG of which the advertised price does not exceed $5, or a credit of $5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.

How to Remove a Broken Bolt

Amateur Mechanics Who Break Studs and Bolts Will Find the Suggestions Made Particularly Useful in Remedying the Difficulty

Answers to the Following Question Published in the April Issue

"How may rusted, stuck or broken bolts, nuts, cap screws, and lag screws, be removed without damaging the surrounding wood or metal? If unavoidable, how can the damage be repaired?"

Removing Rusted or Stuck Bolts

(The Prize-Winning Answer)

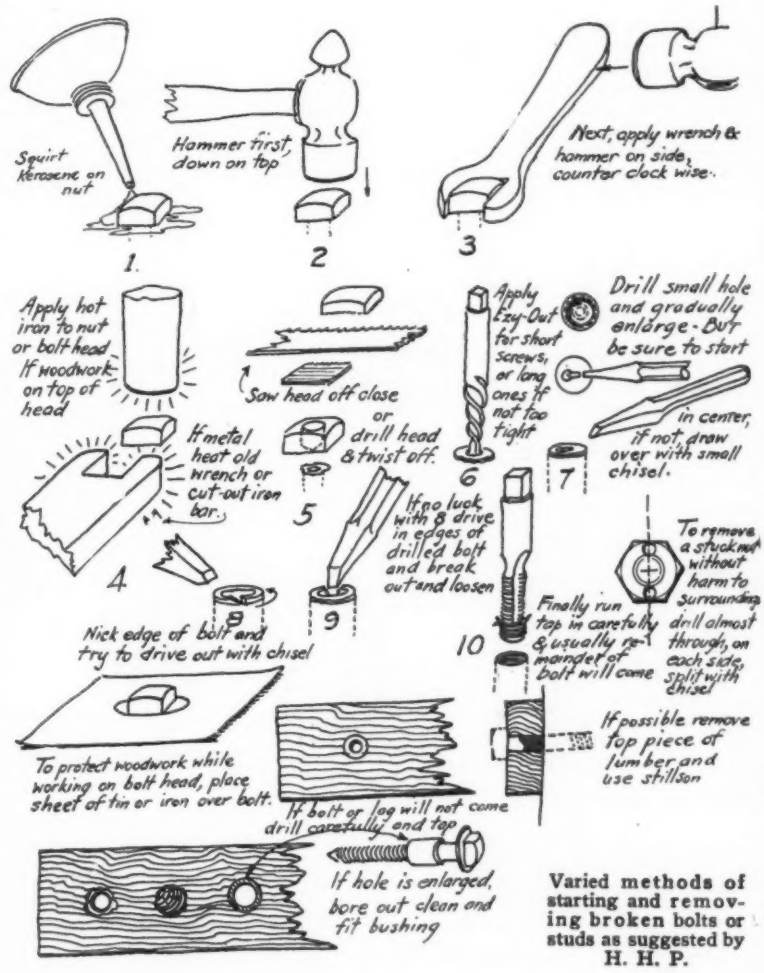
FIRST, we must go through the always-recommended schedule: pour kerosene over the bolt or nut, let it stand a little while and then use a hammer; for a variation of the program, first hit the nut or bolt straight down on the head, then apply an open end wrench and tap the end sideways with the hammer in an attempt to unscrew. Also hit it a few times in the reverse direction. Then heat the bolt; if in woodwork, apply a red-hot iron to the top of the head; if no wood or paint to be damaged, heat up an old open-end wrench or saw a slot in a length of iron bar stock to fit around the nut or bolt. The instructions usually are to the effect that an ordinary wrench is heated red hot, but unless there is a surplus on hand to be gotten rid of, do not spoil a new one.

Anyhow, none of these stunts ever work, at least to our personal knowledge, so go ahead and drill out the villain. First, either saw off close, or drill out and twist off the bolt head; if the latter, be careful to start the drill exactly in center of head and drill just deep enough so that the twisted off head will leave a center mark in the bolt shank. It is absolutely necessary in drilling the shank that the drill starts truly in the center; mark with a prick punch and test with dividers; when centered, apply center punch lightly and start a small drill. Before the body of the drill enters the hole, test again, and if off center, draw the drill over by chiselling a groove on the side of the hole toward which it should go. Use a small, thin, rounded nose-punch for this. Start the drill again, but before body enters, test again and draw over again if necessary. If the hole is not centered, the threads into which the bolt screws are sure to be damaged on one side, or if the shank only of the bolt is drilled, a wall of metal will be left on one side and the bolt cannot be gotten out or broken up.

Usually nothing but a small hand-drill or breast-drill is available, so it is best to start with a small diameter drill and follow up with larger ones until almost reaching the root diameter of the threads or the body diameter of a long bolt. Then apply more kerosene, nick the edge of the drilled-out bolt and try to turn it out by driving against the edge with a narrow cold-chisel. Often the drilling out of the center will relieve the pressure and the bolt will turn. If a set of Ezy-Outs are available, try one of them, but in the case of a long screw or bolt, rusted fast, the Ezy-Out will probably break unless care is used, leaving things worse off than before. Next, after drilling out all the metal possible, take a narrow chisel and drive in the sides of the bolt toward the center; this will usually break down and loosen the shell of the bolt to considerable depth. Be sure the threads (internal) are cleaned out for several threads down from the top, then start in a tap of same diameter and pitch as the bolt; turn in carefully and often this will catch the remains of the screw at the bottom of the hole and this will turn out with the tap when withdrawn. If there are no threads, tapping with a tap of bolt body diameter will break up and withdraw most of the shank remaining.

A rusted or stuck nut is best removed, without injuring the surface upon which it is screwed, by drilling a small hole down each side, not quite through, then splitting in half with chisel.

To protect woodwork while working on bolt head, cut a sheet of tin or iron to fit over head of bolt. If


Squirt kerosene on nut
Hammer first, down on top
1.
2
Next, apply wrench & hammer on side, counter clock wise.
3
Apply hot iron to nut or bolt head. If woodwork on top of head
Saw head off close or drill head & twist off.
5
If metal heat old wrench or cut-out iron bar.
4
Nick edge of bolt and try to drive out with chisel
8
9
If no luck with 8 drive in edges of drilled bolt and break out and loosen
Apply Ezy-Out for short screws, or long ones if not too tight
6
Drill small hole and gradually enlarge - But be sure to start in center, if not, draw over with small chisel.
7
To remove a stuck nut without harm to surrounding drill almost through, on each side, split with chisel
Finally run tap in carefully & usually remainder of bolt will come
10
If possible remove top piece of lumber and use stillson
To protect woodwork while working on bolt head, place sheet of tin or iron over bolt.
If bolt or lag will not come drill carefully and tap
If hole is enlarged, bore out clean and fit bushing

Varied methods of starting and removing broken bolts or studs as suggested by H. H. P.

the hole through the wood is enlarged or damaged while removing bolt, plug, drill out a clean hole large enough to clear up ragged opening, then fit a hardwood or metal bushing drilled to fit the new bolt or screw.

H. H. P., Los Gatos, Cal.

Loosening Obstinate Studs

HOW many times have you worked for hours (it seemed so) trying to remove an obstinate nut or cap screw and finally succeeded in breaking it off? Screw threads will stick, especially if no care was taken to provide for their removal at the time of setting. Bolts, nuts and cap screws become stuck from a number of causes. Rust is probably the most common, but poor threads, bent screws, jamming and misalignment, or crossed threads also contribute to the cause of sticking. If all bolts and screws were coated with graphite grease before setting there would be but little trouble experienced in their removal and a tighter joint would result from the free turning but not loose thread, with less danger of breaking. Lag screws in wood become rusted, or stuck fast by a chemical action between the metal and the tannin in the wood, as is the case with galvanized lag screws in oak.

When a nut or screw will not start with ordinary pressure on the wrench there is a temptation to strike the wrench or lengthen it out with a piece of pipe. Then something must give, but very likely it will be the bolt or screw and not the thread. Instead of striking the wrench, strike the nut on all sides, or the cap screw square on the head, and try again with a tension on the wrench at the same time the head is struck. If still unsuccessful, heat the casting all around the screw and while hot strike a sharp blow with the hammer and strain on the wrench. After several attempts at heating and rapping have failed, you can make one last heroic effort and either start the screw or break it off. Before making this last attempt, it might be advisable to form a putty dam around the nut or screw head and fill with rust solvent. The solvent will penetrate rust, softening and loosening it, and facilitate removal, as outlined above.

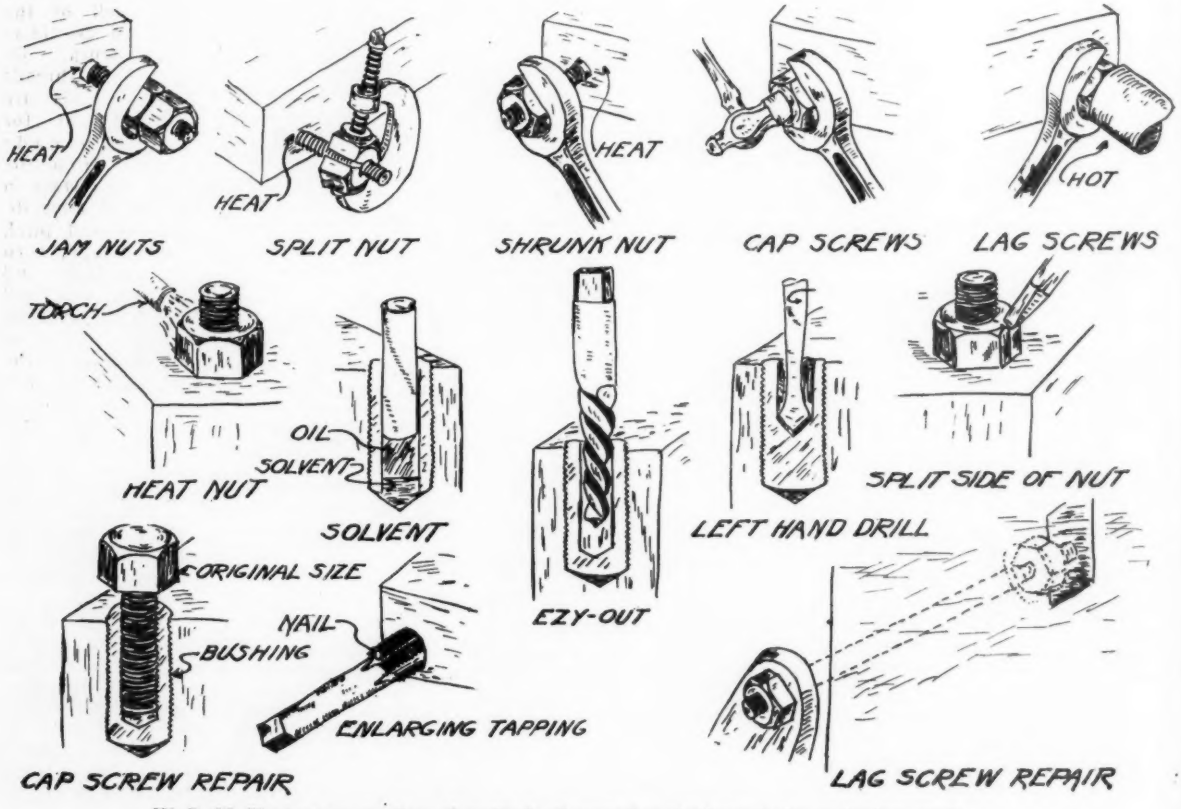
A lag screw that will not start can generally be coaxed by holding a red-hot bar on the head until the screw is well heated, striking the head a sharp blow and straining on the wrench. A blow torch used with care will accomplish the same purpose.

Studs can be removed with two nuts jammed against each other, using the wrench on the closer nut. Sometimes it is practical to shrink on a nut by heating the nut to a dull red, quickly running it onto the thread and cooling. The nut must be tapped so that when cold the thread cannot be entered, and it must be tight when hot. A split nut and a strong clamp may also be used to good advantage. Put two saws, side by side, in the hack saw frame and split one side of a nut. Run the nut on and set up the clamp which is to be used as a wrench. The same method applies to broken cap screws that are not broken off close.

Nuts that will not respond to any other treatment can be split by the careful use of a cold-chisel on the thin part of the nut. Try sawing the side off of the nut close to the thread and using the wrench on the side opposite the cut.

Cap screws and studs that are broken off close to the casting can be removed in several ways, but the easiest and best method is to get a little device called Ezy-Out screw extractor. This device is similar to a left hand tap and has a very steep, thread-like spiral cutting, which jambs in a hole drilled into the broken portion of the stud or cap screw and backs it out. Ezy-Out seldom if ever fails when properly used as directed. Sometimes a stud or cap screw that has been broken by too strong an arm on the wrench can be backed out with a punch or small cold-chisel. Often the broken screw can be backed out by a left hand drill. Grind a twist drill to

(*Continued on page* 162)



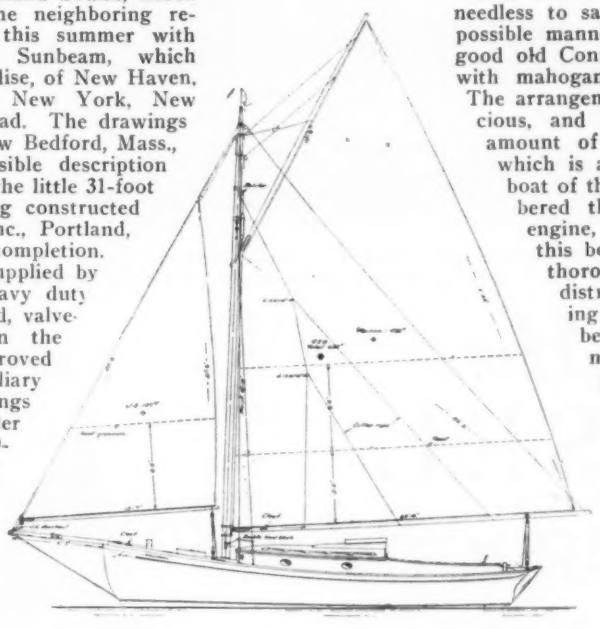
W. B. M. illustrates a number of methods of removing obstinate bolts or broken studs

A Bright SUNBEAM

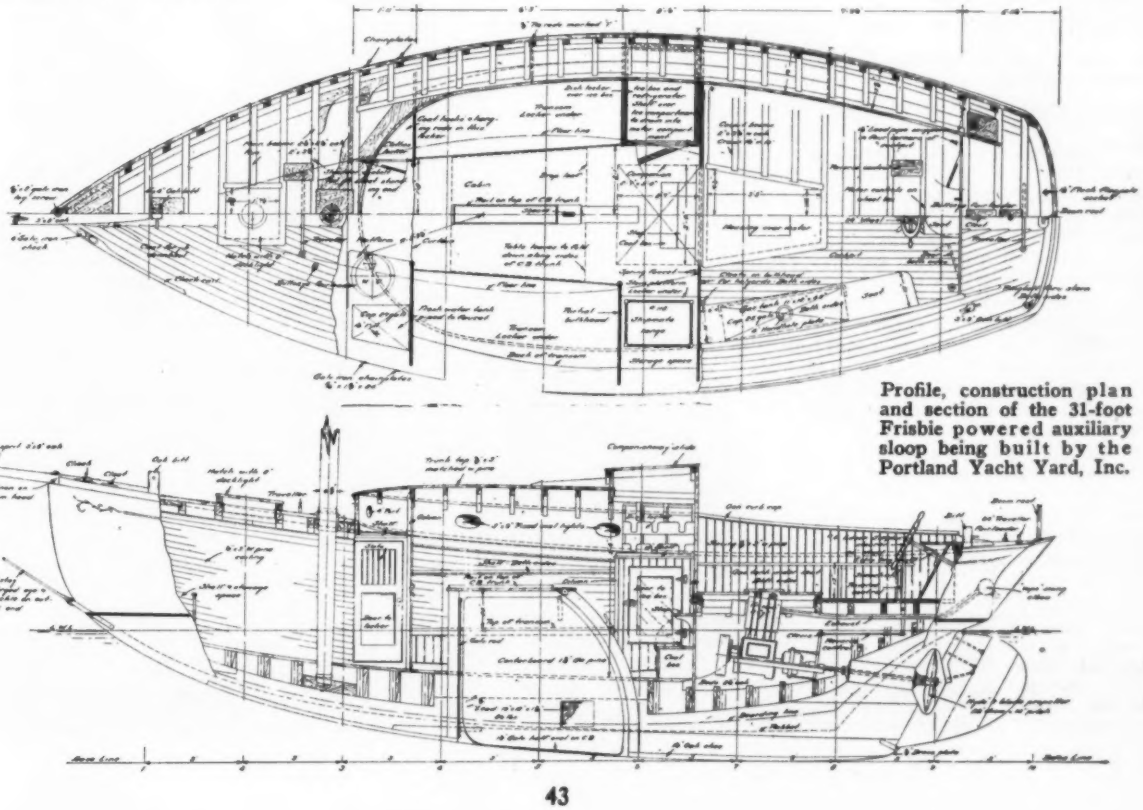
Auxiliary Power in Sailing Craft Is Now Regarded As a Necessity on All Properly Equipped Craft

THE waters of Long Island Sound, Block Island Sound, and the neighboring region will be graced this summer with the new auxiliary sloop Sunbeam, which is being built for T. F. Paradise, of New Haven, assistant treasurer of the New York, New Haven, and Hartford Railroad. The drawings by Wm. H. Hand, Jr., of New Bedford, Mass., show better than any possible description the sweet lines and form of the little 31-foot auxiliary. This boat is being constructed at Portland Yacht Yard, Inc., Portland, Conn., and is rapidly nearing completion.

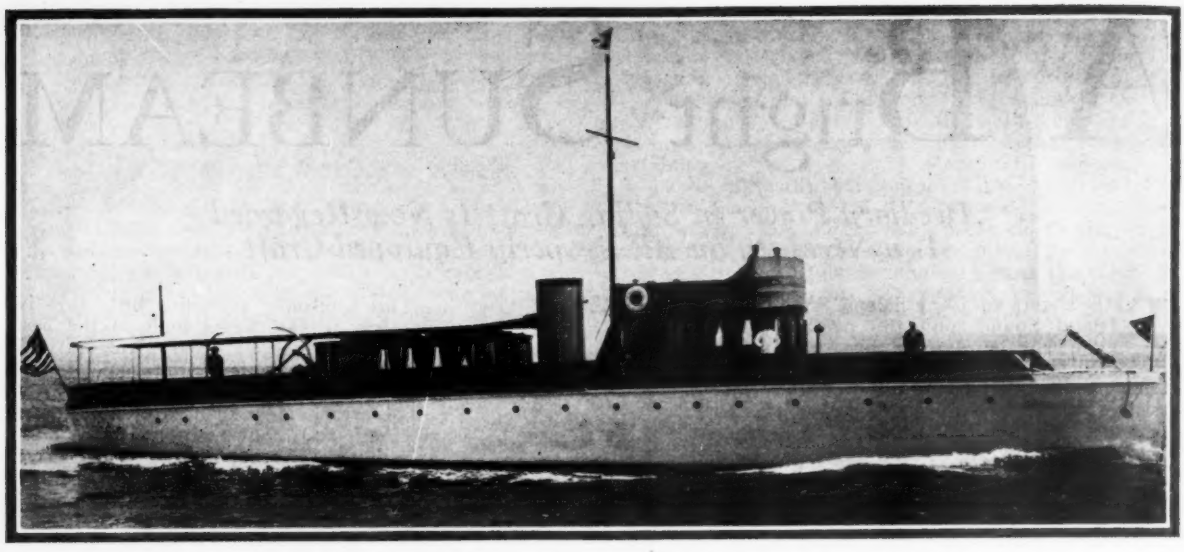
Auxiliary power will be supplied by one of the new 25 h.p. heavy duty model S Frisbie, all enclosed, valve-in-head engines, which, in the heavy duty model has proved especially suitable for auxiliary service. While the drawings reproduced show the smaller model FB Frisbie special, 10-14 h.p., which was originally intended, the success of the new model S influenced the owner in favor of the larger machine. It has the advantage of developing a good substantial 25 h.p. at reasonable revolution rates.



This unusually attractive little ship is, needless to say, being built in the best possible manner of cedar planking, over good old Connecticut white oak frames, with mahogany cabin trunk and trim. The arrangement plans are simple, spacious, and convenient, with a large amount of cockpit and deck space, which is as it should be in a small boat of this kind. It will be remembered that the model S Frisbie engine, which is to be placed in this boat is the result of a very thorough canvass of the Frisbie distribution organization during the winter. A large number of replies concerning the most universally popular engine size and style were compiled, and the result built up into the design of this machine. It is a four-cylinder detachable valve-in-head machine, with the cylinders cast in one block. Its bore and stroke is 4 by 5 inches, and it develops its power at a maximum of 900 r.p.m.



Profile, construction plan and section of the 31-foot Frisbie powered auxiliary sloop being built by the Portland Yacht Yard, Inc.



Lolomi, a 112 foot craft which has been modernized by the substitution of two 125 h.p., 6 cylinder Mianus Diesel engines, replacing gasoline equipment

Two More DIESEL Conversions

Demands for Economy in Operation Lead to Installation of Heavy Oil Engines in Large Vessels

LOLOMI, originally designed and built for service as a submarine chaser, has recently been purchased by S. W. Labrot. Her original power plant consisted of steam turbines which have sufficient capacity to drive her 20 knots. After the war she was returned to her original owner, Rodman Wanamaker, who replaced the steam plant with two gasoline engines of 125 h.p. each, which reduced the speed. The present owner, after an unfortunate experience with gasoline engines, decided to change over to heavy oil engines for several reasons. The principal one was the reduced fire hazard, and also the reduction in fuel cost with increased cruising radius. The new engines will be two 125 h.p. airless injection, two-cycle Mianus Diesel engines of the six-cylinder type,

(*Continued on page* 92)

Schooner yacht, Evelyn Moore, now equipped with a 70 h. p. Mianus Diesel engine

Miami One-Design Boats *To Race at Manhasset Bay*

Carl G. Fisher Orders Twenty More Racing Boats to Be Powered With Scripps Motors and Built by The Purdy Boat Company

PLANS are practically completed for the summer's racing activities. Never before in the history of the sport have so many events been scheduled or has the interest been so keen, both from the standpoint of the racing man and spectator.

The racing season will get under way early in June, yet for the first month the activities will be more in the form of local events, and it will not be until early in July that the first national championships will take place.

The Annual Regatta of the Mississippi Valley Power Boat Association is always the first big gun of the season. This year the Regatta goes to White Lake, Michigan, this being the first time in the history of the Valley Association that their big meet has been held so far East. A. T. Griffith, of Peoria, Ill., secretary of the Mississippi Valley Power Boat Association, already announces the receipt of nearly one hundred entries, with indications for well over the hundred mark before the entries close.

For the cruisers there are more than the usual number of events scheduled, particularly on Long Island Sound and the Hudson River. The Colonial Yacht Club of New York City, which in the past was very active in cruiser racing, but for the last several years has not done a great deal, again comes into the limelight and schedules two major cruiser events which are open for the members of all clubs. The first of these will be held on June 21, when a race from the club house of the Colonial Yacht Club will be run to Bear Mountain, open to cruisers from all clubs. The annual race of the New York Athletic Club from New Rochelle to Block Island is scheduled for July 11.

Perhaps the event of the greatest national importance during the summer of 1925 will be the Annual Gold Cup Regatta, which this year for the first time will be held on Long Island Sound. Manhasset Bay, at Port Washington, L. I., has been chosen as the location for the Gold Cup Regatta, and altogether some twenty-two events are scheduled, including classes for all types of cruisers and express cruisers, as well as events for displacement craft, hydroplanes, boats powered with outboard motors, sea skiffs, etc.

The dates for the Gold Cup races have been fixed for August 26 to 30, inclusive. On the first two days, cruisers and fast cruisers will race from Philadelphia to Manhasset Bay for the James Craig trophy and express cruisers from Middletown, Connecticut, to Manhasset Bay for the Express Cruiser Championship trophy.

On Friday, Aug. 28, a race will be held for the Handicap Cruiser Championship of North America. The race will start from Manhasset Bay at about 10 a. m. and the boats will race around Stratford Shoal Light and return, a distance of about eighty miles. On the same date, one-mile speed trials will be held for the One-Mile Championship of America. This trophy has not been raced for since 1922, when Gar Wood in his Miss America II won the trophy at a speed of 80.5 miles per hour. The rules governing the competition of this trophy, provide that in order that the cup shall be awarded to another boat, it must show a speed in excess of that speed at which it was last won. In other words, to win the One-Mile trophy this year, a boat must show a speed better than 80.5 miles an hour, as an average for the six one-mile dashes which will be run. As the challenger for this trophy is aware of this fact and has two boats well under way, which he believes will have no trouble in beating the previous record of 80.5 miles an hour, it will be seen that a new world's record is likely to be established at this year's Gold Cup Regatta. (*Continued on page* 156)

Schedule of Racing Dates 1925

May 30—New Bedford Y. C., Padanaram to Newport.
May 30—Harlem Y. C., Open.
June 6—Port Washington Y. C., Open.
June 10—San Francisco-Tahiti Race.
June 13—Manhasset Bay Y. C., Open.
June 13—Corinthian of Marblehead, Open.
June 16—Start Larchmont-Indian Harbor Joint Cruise.
June 17—Eastern Y. C., Open.
June 20—Corinthian of Marblehead, Open.
June 20—Larchmont Y. C., Open
June 21—Colonial Y. C., New York City, to Bear Mountain, Hdcp. Cruiser Race.
June 27—Seawanhaka Corinthian Y. C., Oyster Bay, Open.
June 27—Eastern Y. C., Open.
July 3, 4 & 5—Annual Regatta, Mississippi Valley Power Boat Association, White Lake, Mich.
July 3—American Y. C., Open.
July 4—Larchmont Y. C., Open.
July 4—Eastern Y. C. Annual Regatta
July 4—Corinthian of Marblehead, Open.
July 6-12—Eastern Y. C. Cruise.
July 11—New York A. C. Cruiser Race to Block Island.
July 11—Corinthian of Marblehead, Open.
July 11—Indian Harbor Y. C., Open.
July 12—Start Boston Y. C. Cruise.
July 18—Eastern Y. C., Open.
July 18-25—Larchmont Race Week.
July 18—Auxiliary Race, Cruising Club of America, Boston.
July 20-23—Eastern Y. C. North Shore Junior Championship
July 25—Mackinac Race, Chicago Y. C. and Bayview Y. C.
July 25—Corinthian of Marblehead, Open.
July 26—Larchmont-Gloucester Race, Cruising Club of America.
Aug. 1—Corinthian of Marblehead, Open.
Aug. 1—Stamford Y. C. Open.
Aug.3-7—Eastern Y. C International, Class R.
Aug. 7—Bayside-Block Island Auxiliary Race.
Aug.7-8—Annual Regatta, Miles River Y. C., St. Michaels, Maryland.
Aug. 8—Knickerbocker Y. C., Open.
Aug.8-15—Marblehead Race Week.
Aug. 13—New York Y. C. Cruise.
Aug. 15—Huguenot Y. C., Open
Aug. 22—Eastern Y. C., Open.
Aug. 22—New York A. C., Open
Aug.24-28—Eastern Y. C. National Junior Championships.
Aug. 25—James Craig Trophy Race, Philadelphia to Manhasset Bay.
Aug. 26—Handicap Express Cruiser Championship, Middletown to Manhasset Bay
Aug. 28—Handicap Cruiser Championship of America.
Aug. 28-30—GOLD CUP REGATTA, MANHASSET BAY.
FRIDAY, AUGUST 28
Cruisers—Handicap Championship of America. Manhasset Bay to Stratford Shoal and return. About 80 miles. 10 a.m. Mile Trials all day.
SATURDAY, AUGUST 29
1:15- 1:45—First heat, Miami One-Design Cl. 12 miles.
2:00- 2:45—First heat, Gold Cup. 30 miles.
2:50- 3:20—Second heat, Miami One Design Cl. 12 miles.
3:30- 4:15—Second heat, Gold Cup. 30 miles.
4:20- 4:40—Baby Gar Invitation. 12 miles.
4:45- 5:30—Third heat, Gold Cup. 30 miles.
5:45- 6:15—Free for All Displacement Runabouts. 24 miles.
SUNDAY, AUGUST 30
10:00-10:30—Outboard Motor Race, 3 classes. 3 miles.
10:35-10:55—Aquaplane Race. ½ mile.
11:00-11:50—Truth Race for All Boats. Not over 10 miles.
12:00-12:20—First heat, Dodge Trophy. 12 miles.
12:35- 1:05—Third heat, Miami One Design Cl. 12 miles.
1:20- 1:40—Second heat, Dodge Trophy. 12 mi.
1:50- 2:05—First heat, 151 Class Hydroplanes. 6 miles.
2:20- 2:40—Third heat, Dodge Trophy. 12 mi.
2:50- 3:05—Second heat, 151 Class Hydroplanes. 6 miles.
3:20- 3:40—Fourth heat, Dodge Trophy, 12 mi.
3:50- 4:20—Fourth heat, Miami One Design Class. 12 miles.
4:30 —Race for International Trophy. 185 miles.
Aug. 20—New Rochelle Y. C., Open.
Aug. 29—Corinthian of Marblehead, Open.
Sept.1-5—Star Class, International Championships.
Sept.4-7—Annual Regatta, Detroit, Mich.
Sept. 5—Seawanhaka Corinthian, Open.
Sept. 5—Eastern Y. C., Open
Sept. 7—Larchmont Y. C., Open.
Sept. 7—Corinthian of Marblehead, Open.
Sept. 10—Corinthian of Marblehead, Open.
Sept. 12—Indian Harbor Y. C., Open.
Sept. 12—Eastern Y. C., Open.
Sept.12-13—Ohio Valley Motor Boat Association Regatta, Cincinnati, Ohio.
Sept. 19—Manhasset Bay Y. C., Open.
Sept. 26—City Island Y. C., Open.
Mar. 19-20, 1926—Annual Mid-Winter Regatta, Miami Beach, Fla.

Let *the* Tides Help You

A Simple, Graphic Method of Determining the Velocity and Direction of the Current in a Long Waterway, or of the Time of a Favorable Current for Passing Through Such a Waterway

by G. T. Rude

Commander, U. S. Coast and Geodetic Survey; Chief, Division of Tides and Currents.

WE have probably all experienced the feeling of buoyancy and exhilaration when sailing with a fair wind or with the current, seeing our little six-knot craft skimming past headlands and islands at a rate which gave us a feeling of exultation and pride, even though we had absolutely nothing to do with designing the boat, not so much as to the driving of a nail in the planking. Again, we have felt a sense of boredom as we beat back and forth against a head wind, and even of keen disappointment if, added to this, we found at the completion of a tack that an adverse current had kept us from making to windward. We felt out of harmony with the whole world, particularly that part which has to do with the sea.

Though the saving of time and fuel may be a matter of minor importance to the average motor boatman, still this feeling of exhilaration is worth a few minutes of forethought and planning to get at least the benefit of favorable currents. We cannot afford to choose our times of departure from a port so as to have fair winds, since they are variable; but it is practicable to do so in the case of currents, since they have a fixed period of ebb and flood, and the average conditions of the surface currents along the main part of the waterway may be determined beforehand.

While it is a very simple matter to obtain from the current tables issued in advance each year by the Coast and Geodetic Survey the predicted times of each slack water in the various waterways like Cape Cod Canal and Hell Gate, it is a somewhat more difficult procedure to determine from these tables, without the use of the current diagram described hereafter, the movement of the currents throughout the entire length of a long waterway like Chesapeake Bay.

For the purpose of aiding the motor boatman in obtaining such information readily and to make use of the assistance rendered a vessel by favorable currents, the Coast and Geodetic Survey devised Current Diagrams for the inland waters of the United States. These are published in the Current Tables issued by that Bureau. The diagrams furnish the means of getting this information readily by a graphic method.

The Current Tables for the year 1925 for the Atlantic and Pacific Coasts of the United States carry current diagrams in the back of the tables for the following places:

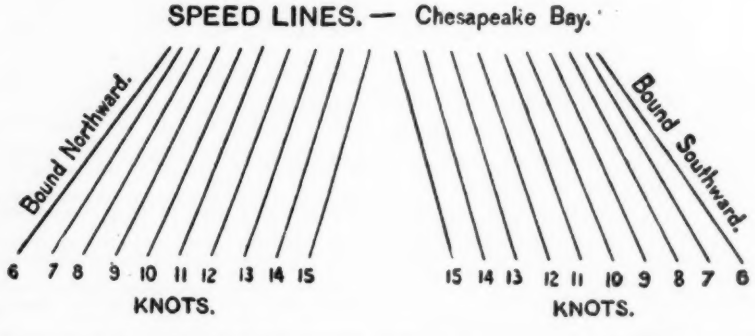
Atlantic Coast Current Tables
Boston Harbor.
Nantucket & Vineyard Sounds.
East River, New York.
New York Entrance, via Ambrose Channel.
Delaware Bay.
Chesapeake Bay.

Pacific Coast Current Tables
San Diego Bay.
South San Francisco Bay.
North San Francisco Bay.
Puget Sound.
Channels North of Vancouver Island.

Recently the owner of a motorboat, which each summer plies the inland waterways of the east coast, suggested that current diagrams on a larger scale than possible in the Current Tables and printed on heavy chart paper would prove of considerable value to the motor boatman. The Coast and Geodetic Survey, always welcoming suggestions and constructive criticism of its publications, acted immediately on this helpful suggestion and has recently issued such a current diagram for Nantucket and Vineyard Sounds. This diagram is intended as the first of a series for other inland waters of the United States, as the need arises.

THE CURRENT DIAGRAM

The Current Diagram is not intended to indicate, as has been thought by some boatmen, the courses which must be followed by vessels to obtain the most favorable current conditions, but they are devised to serve the following two useful purposes: First, to permit the boatman to determine readily by a graphic method the time at which he should enter a long waterway in order to pass through, carrying the most advantageous conditions of current flow; secondly, to furnish him the current conditions he will encounter, having entered the waterway with no particular effort to time his entrance.



Speed lines to accompany the current diagram, representing the normal speed of a vessel

Taking the current diagram of Chesapeake Bay as an example, the motor boatman may determine the time his boat, having a certain speed indicated on the speed lines, should enter the bay or pass any of the places listed on the left margin of the diagram in order to obtain a favorable current all the way to Baltimore; or, having entered the bay without any special attention to the time of current, he may determine the velocity and general direction of the current to which his boat will be subject as he passes up the bay past the different places listed in the margin of the diagram.

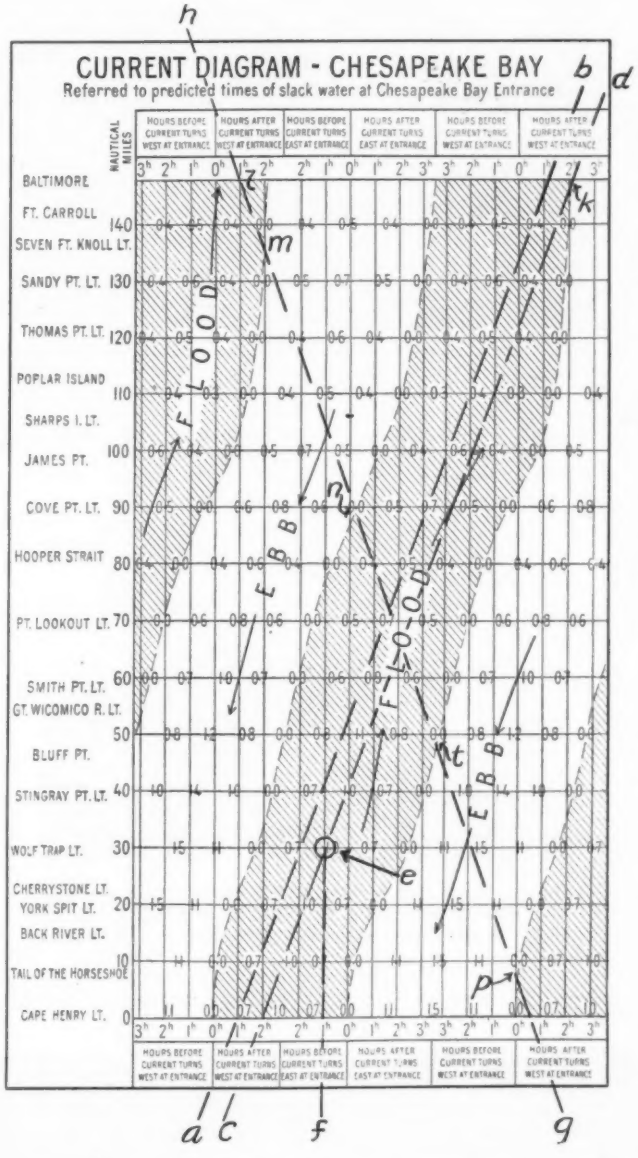
The current diagram represents only average conditions of the surface currents along the middle of the channel

from Cape Henry Light to Baltimore. On the diagram northerly streams are designated as Flood currents and southerly streams as Ebb currents. The small figures on the face of the diagram denote the velocity of the currents in knots and tenths of knots; the figures in the left margin the distances along the bay reckoned from Cape Henry Light, and the figures at the top and bottom indicate the hours before or after the time of turning of the current at Chesapeake Bay entrance.

The speed lines are for the purpose of assisting the boatman in the use of the diagrams, and are directly related to the diagram. The boatman need interest himself only in that speed line which represents the normal speed of his own boat. By their use the velocity and general direction of the current encountered by a vessel on passing through the Bay may be determined; also the time may be found for leaving any place shown in left margin of diagram to obtain a favorable current.

To Determine Velocity and Direction of Current

With parallel rulers or otherwise transfer to the diagram the direction or inclination of the speed line corresponding to the approximate normal speed of the boat in knots, placing the edge of the ruler opposite the time before or after current turns east or west at the entrance, as the case may be, at the bottom or top of the diagram. If the ruler's edge lies along the shaded portion of the diagram, a flood current will be encountered; if along the unshaded, an ebb current; and if along the boundary between the two, slack water. The figures on the diagram along the edge of the ruler will indicate the velocity of the current encountered at any place along the bay as indicated by the names on the left margin of the diagram.



Reproduction of a typical current diagram for Chesapeake Bay. Points and lines drawn on the diagram are referred to in the descriptive text

As an example, let us take a 12-knot vessel bound from the Rappahannock River to Baltimore, passing Wolf Trap Light at 5:30 P. M., July 4, 1925. It is desired to ascertain the velocity and direction of the current which will be encountered. Turning to page 46, Current Tables, Atlantic Coast, 1925, in which the predicted times of the turning of the current for every day in the year at the entrance to Chesapeake Bay are given, it is found that on July 4, 1925, the current at Chesapeake Bay entrance turns easterly, or ebb, at 9:30 A. M., and westerly, or flood, at 4:32 P. M. The time the vessel passed Wolf Trap Light (5:30 P. M.) is about one hour after the time the current turns west at the entrance. With parallel rulers transfer to the diagram the 12-knot speed line Bound Northward, placing the edge of the ruler on the figure 1^h in the block at the bottom of the diagram, Hours after current turns west at entrance (dashed line *a b*). It will be found that the edge of the ruler (dashed line *a b*) passes very nearly through the strength of the current in the shaded portion of diagram, averaging about 0.7 knot. The vessel, passing Wolf Trap Light at 5:30 P. M. on that date, will therefore have a favorable current averaging 0.7 knot, all the way to Baltimore.

To Determine the Time of a Favorable Current for Going Up the Bay

This is very nearly a converse problem to the foregoing. With parallel rulers, as before, transfer to the diagram the direction or inclination of that speed line corresponding to the normal speed of the boat, moving the ruler back and forth over the diagram until its edge runs approximately through the general line of greatest current strength of the unshaded portion if bound southward, and of the shaded portion if bound northward. The time (before or after the current turns east or west at entrance) for leaving any place in the left margin of the diagram will be found vertically above or below the point where the parallel ruler edge intersects with the horizontal line opposite the place in question.

As an example, a 12-knot boat desires to leave the mouth of the Rappahannock River for Baltimore on December 25, 1925, in the morning. At what time should she get under way so as to carry the most favorable current?

Place the parallel ruler edge along the 12-knot speed line bound northward. Transfer this direction to the diagram and move it back and forth till the ruler edge includes the greatest number of larger current velocities in the flood shaded portion (dashed line *c d*). The most favorable time for leaving Wolf Trap Light (at the mouth of the Rappahannock) will be found vertically below the point *e* where this line intersects the horizontal line opposite Wolf Trap Light. This time, it is seen, is 1^h (on line *e f*) before

(Continued on page 136)

Yard *and* Shop

Notes of Interest to Both Owner and Manufacturer

Watch Out for Bullets

SEVERAL recent cases have came to our attention in which crews of Coast Guard vessels have fired on pleasure boats which were either moving rapidly, or for other good reasons did not observe the signal to halt given by the officers. Among these is the case of Alis III, owned by C. W. Feigenspan of Newark, N. J. It seems that the boat was moving through New York Bay on the perfectly legitimate errand of carrying the owner and his family from his country home to the city. The boat happens to be a fast one, of the Sea Skiff cruiser type, and from all appearances does not resemble anything else but the yacht which it is. On the particular voyage referred to a Coast Guard patrol boat tried, and apparently could not overtake the cruiser, and either the whistle signals or other signals were not audible, due to the noise of the machinery and the rush of air on the rapidly moving boat. The unpleasant consequence was a shower of machine gun bullets, which was the first intimation any of those on board had that they were being requested to stop. Fortunately, the aim of the Coast Guard crew was not very good, and the owner and his family were not injured in the fusillade. On several previous occasions, this same boat had been stopped and inspected while engaged on fishing trips off the Jersey coast, which is its home territory. In every instance the boat was found to be on a perfectly proper errand, and the Coast Guard officers did not even offer an apology after their fruitless search.

M. J. Hager, manager of the new sales office that has been recently opened in New York City by the Belle Isle Hacker Boat Sales Company of Detroit

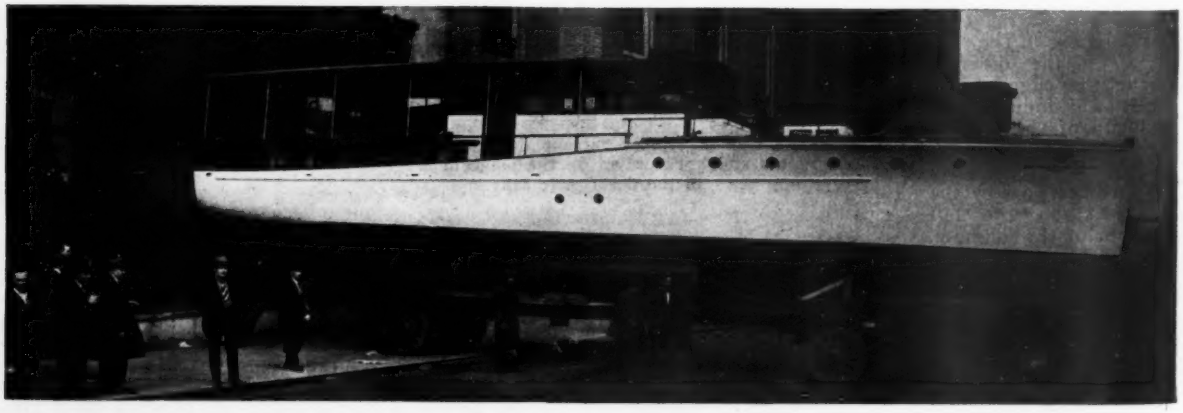
Mr. Feigenspan has taken the matter up with the official in charge of the Port of New York through his attorneys, in an effort to see if it is not possible for a yacht to move about in the harbor without being subjected to a rapid fire bombardment by every Coast Guard vessel it encounters. It seems to be the practice of the Coast Guard crews to fire first and investigate afterwards. All yachtsmen should be particularly cautious when operating their boats in waters patrolled by the Coast Guard, and if possible keep a frequent watch astern in order to make sure that they are not being pursued by Coast Guard craft. If ordered to stop, wisdom and experience would dictate that it is better to do so at once.

One of the 38-foot high-speed Matthews cruisers, which has been purchased by the Ohio State Fish Commission. A Sterling Sea Gull engine drives it 17 m.p.h.

Joe's New Baby

NEWS has leaked out that Old Man Joe of Snow & Petrelli Mfg. Co., New Haven, Conn., has become a proud and a mighty proud Grand Daddy at that. It is a mighty robust little chap—just like all the others of his family—a little Dry Disc Clutch to sell at a remarkably low price. You fellows who can't quite see a reverse gear, but have wishes for an inexpensive but dependable little cut-out clutch for a one-lunger or any motor up to four-cylinder, 3¾-inch bore by 4½-inch stroke, can now have your wishes come true. This clutch drives through durable asbestos

(*Continued on page 64*)

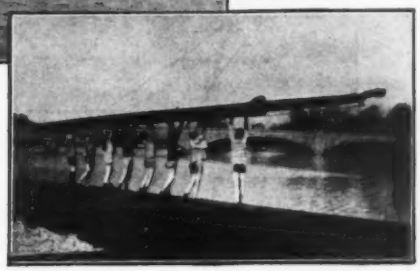


This is how they get the big ones in and out of the Elco Sales Room in New York. The demand for these boats is so heavy that the display sample has been sold and is now on the way to China for Lansing Hoyt of Shanghai

Princeton crews off for a spin on Carnegie Lake.

Left: John Schultz, Rigger

Below: Putting the gleaming Valsparred shell in the water.



The Gleaming Shells of the Princeton Crew are Valsparred, of course!

FASCINATING—to see the light shells of the Princeton crew glide gracefully through the water, with oars glistening in the sun!

Valsparred, of course! For John Schultz, rigger of the Princeton crews, knows that no other varnish meets so well the needs of a protective finish for racing shells. "Throughout my thirty or more years of experience with crews in various parts of the country," he writes, "I have used Valentine's varnishes with the most satisfactory results. On all occasions I have recommended the use of Valentine products for covering shells and oars. Since Valspar first came out, I have used the varnish with complete success under all conditions."

Valspar's smoothness of surface and brightness of finish, as well as its extraordinary durability and waterproofness, contribute to its popularity as a finish for racing craft. For the same reasons it is used by leading boat builders and on the best boats the world over. For Valspar is recognized everywhere as the ideal marine varnish!

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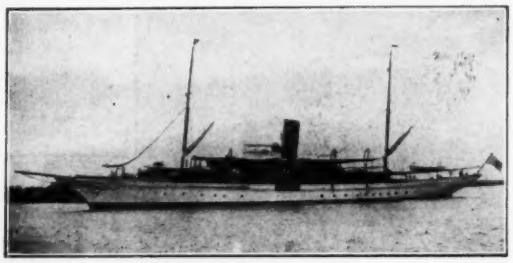
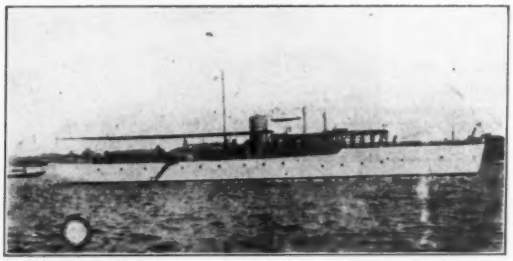
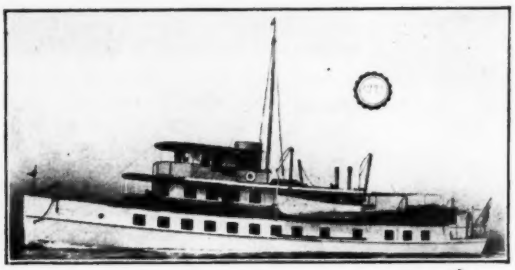
On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



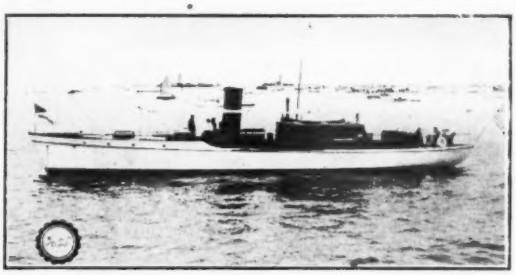
No. 341—For Sale or Charter—Large, seagoing steam yacht. Palatial accommodation. Unusual opportunity. Several similar larger and smaller available craft. Cox & Stevens, 25 Broadway, New York.



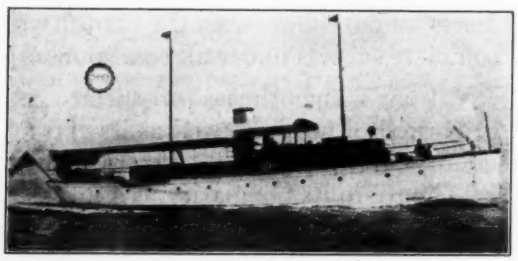
No. 885—FOR SALE OR CHARTER—Fast, steel, twin screw, cruising power yacht, approximately 120 ft. in length. Speed up to 16-17 miles; Winton Motors. Unusually large accommodation, including deck dining saloon, three staterooms, bath and two toilets. Handsomely finished and furnished. COX & STEVENS, 25 Broadway, New York.



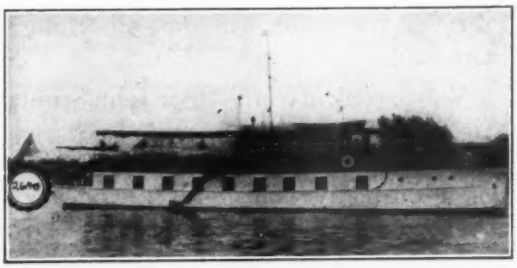
No. 3793—FOR SALE OR CHARTER—Commodious twin-screw motor houseboat; 100x22x4 ft. Speed, 11-12 miles; two 6 cyl. 125-150 H.P. Winton gasoline motors, new 1923. Splendid accommodations, includes double and single stateroom and living room in deckhouse; five staterooms and three baths below forward; dining saloon amidships. All conveniences. Price and further particulars from Cox & Stevens, 25 Broadway, New York, N. Y.



No. 2025—FOR SALE—Lawley 83-ft. cruising power yacht. Speed up to 16 miles. 6 cyl. Standard motor. Accommodations include saloon with two extension berths, two double staterooms, bath and two toilets. Roomy bridge and large after deck. Bargain for quick sale. Cox & Stevens, 25 Broadway, New York, N. Y.

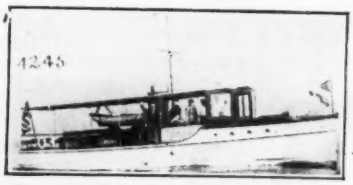


No. 3489—FOR SALE—Particularly attractive 90 ft. twin screw cruisin,g motor yacht. Built 1917. Speed 13-14 miles; Winton Motors. Deck dining saloon, three staterooms, bath and two toilets. Handsome finished and furnished. COX & STEVENS, 25 Broadway, New York.



No. 2640—FOR SALE OR CHARTER—Modern twin-screw 80-ft. Mathis motor houseboat. Speed up to 12 miles; two 6-cylinder Standard motors. Deck dining saloon; below forward two double and two single staterooms, lobby containing transom, two baths and toilet room. Excellent condition. Price and further particulars from Cox & Stevens, 25 Broadway, New York.

No. 4460—For Sale—Modern fast, 65 ft. twin-screw cruiser. Speed up to 18 miles; two 6 cyl. 150 H.P. Speedway motors. Dining saloon in deckhouse; two staterooms, two toilet rooms, etc. Price attractive. Cox & Stevens, 25 Broadway New York,.



No. 4245—FOR SALE—Attractive 48-ft. bridge deck cruiser. Recent build. Speed, 10 miles; 40-60 H.P. motor. Saloon with three berths, double stateroom, 2 toilet rooms. Cox & Stevens, 25 Broadway, New York, N. Y.

No. 4393—For Sale—High speed 50 ft. twin-screw cruiser. Speed up to 30 miles; two 6 cyl. 200 H.P. Sterling motors. Hull double planked mahogany. Stateroom, saloon, toilet room, etc. Price reasonable. Cox & Stevens, 25 Broadway, New York.

PLANS, PHOTOGRAPHS AND PRICES ON REQUEST

Advertising Index will be found on page 166

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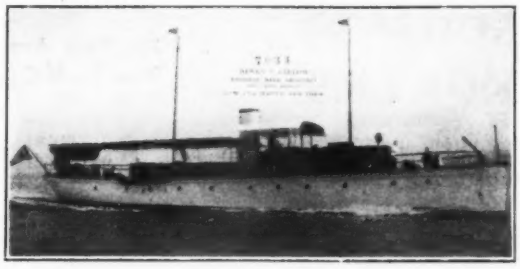
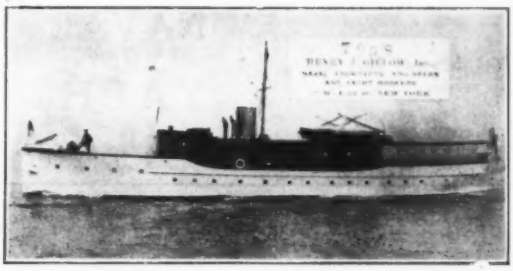
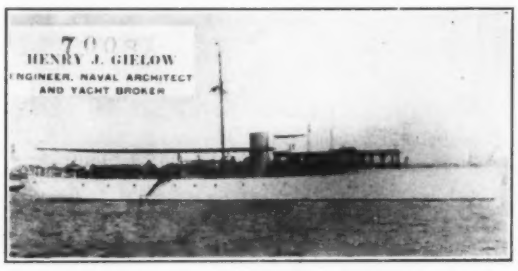
We have a most complete and up-to-date list of steam and motor yachts of all sizes, sail, auxiliary, and houseboats, on file in our office, kept constantly up-to-date by thorough and comprehensive canvass of the entire yachting field from time to time. We are in a position to submit full information on any type of boat upon request.



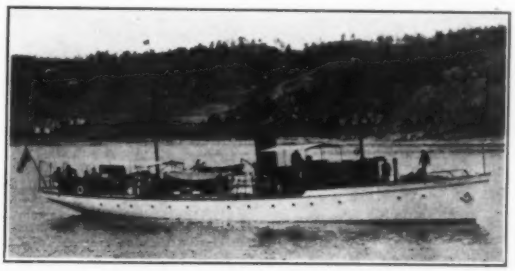
No. 7034—For Sale—High-class, 90-foot twin screw motor yacht (never in war service). Built our design, always well owned and now perfect condition throughout. Two 6 cyl. Winton motors, all Winton auxiliary machinery and all furnishings renewed 1922. Twenty-foot deck house contains dining saloon. Has 2 double, one single stateroom. Speed 13-16 miles. Able sea boat. Henry J. Gielow, Inc., 25 W. 43d St.



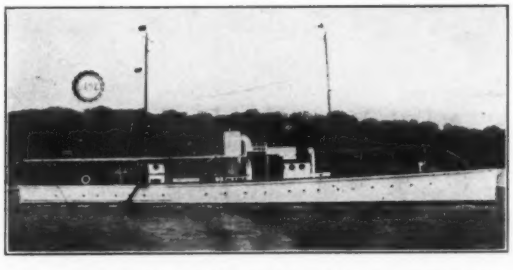
No. 7958—For Sale—Modern Diesel motor yacht, built 1923. 98x15x5'6", 170 H.P. Bessemer Atlas engine, speed 12-14. One continuous teak deck house has living room and dining saloon. Has two double, one single stateroom, bath, sleeps 8-12. All fine condition and complete. Henry J. Gielow, Inc., 25 W. 43d St.



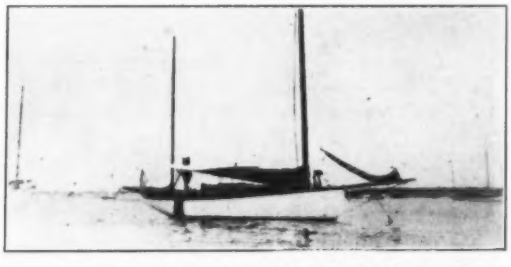
No. 7008—For Sale—Fast 118-foot, twin-screw steel motor yacht with two six cyl. Winton motors, gives speed 14-16 miles. Deck galley and dining saloon. Three double staterooms, two baths. Handsomely furnished and most complete. Thoroughly renovated throughout 1920. Henry J. Gielow, Inc., 25 W. 43d St.



No. 9312—For Summer Charter—Located Quebec. Handsome, able, seagoing twin-screw motor yacht. 106x16x6'6". Ideal craft for extended cruising. Two 6 cyl. Winton motors, speed 12 knots. Deck dining saloon, 1 double, 5 single staterooms. All deck trim of teak. Two independent electric plants. Completely furnished. Henry J. Gielow, Inc., 25 W. 43d St.

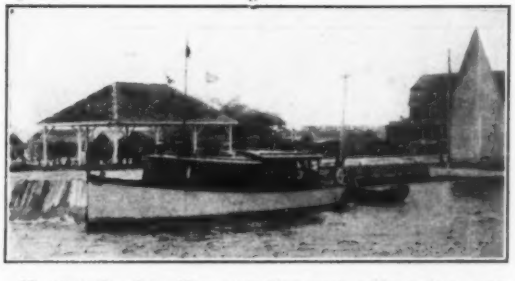


No. 7861—For Sale—Handsome fast, able, twin-screw motor yacht, 138x16'4"x4'9", built of steel, has two 265 H.P. Speedway motors, Kelvinator ice machine and complete every detail. Social hall and dining saloon on deck. Two double, three single staterooms, two baths. Speed 15-17 knots. Just returned from winter cruise West Indies. Finest condition, fully equipped. Henry J. Gielow, Inc., 25 W. 43d St.



No. 8524—For Sale—Roomiest 35-foot shoal draught C. B. auxiliary yawl, large cabin, 6' 2" headroom, 12 H.P. Sterling, speed 8 miles. Sails 1922. Complete inventory, whole outfit fine condition. Well built. Electric lights. Price reasonable. Henry J. Gielow, Inc., 25 West 43d St.

No. 8074—For Sale—Charter. Now in Florida. One of most desirable houseboats available. 77'x17'6"x3', twin 6 cyl. Standard motors, all first-class. Handsomely finished and furnished. Two double, one single stateroom and saloon, two baths, large deck house. Has excellent crew. Economical to run. Hot water heated, completely found. Henry J. Gielow, Inc., 25 West 43d St.



No. 9692—For Sale—Very attractive trunk cabin cruiser, extra fine construction and finish. 70 H.P. motor gives speed 11-13 miles. Steers and controls inside cabin. Sleeps 4 and has roomy cockpit, with top and curtains. Mahogany trim inside and out, even to decks and cabin floors. Very complete in fittings. Opportunity, as owner's health prevents using boat. Fine condition. Henry J. Gielow, Inc., 25 W. 43d St.

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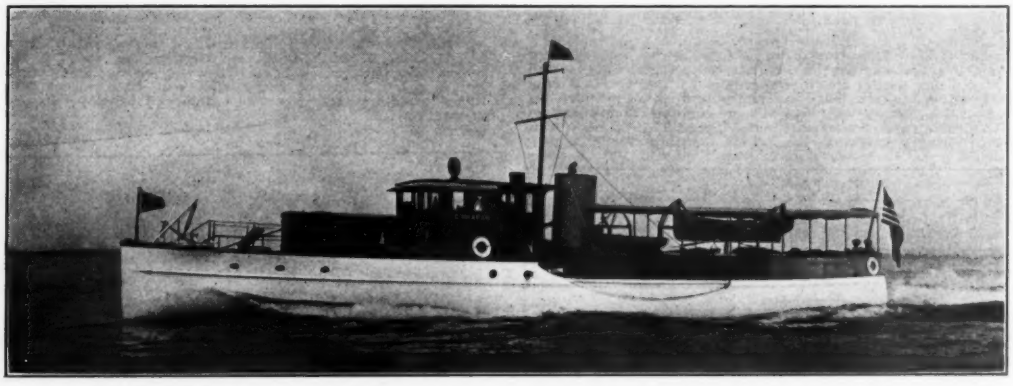
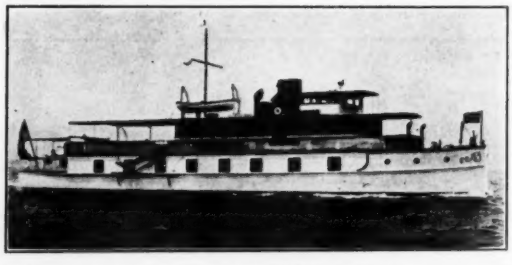
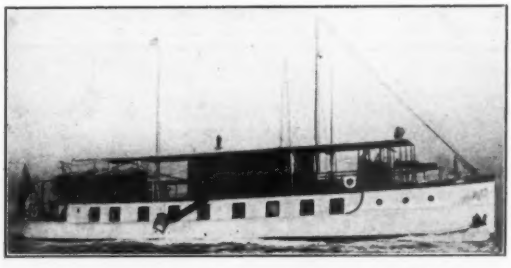


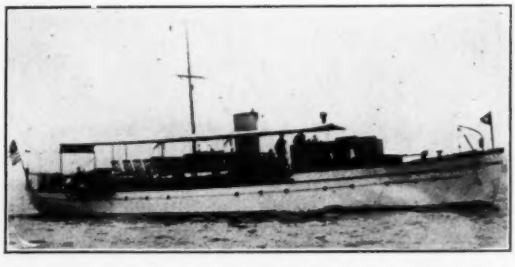
No. 7973. For sale. This attractive twin screw Motor Yacht, one of the smartest and roomiest boats of her size. In perfect condition, two double staterooms, bathroom and large dining saloon. Inspectable in New York.



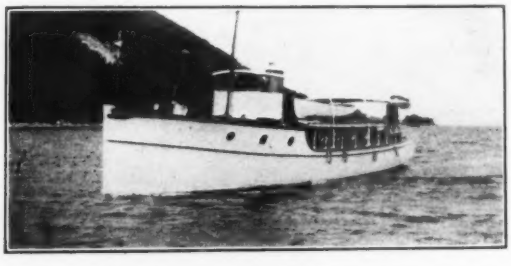
No. 1965. For sale or charter—this attractive twin screw houseboat, 100 x 22 x 3′ draft. Speed 10 miles, accommodations include 5 staterooms, 3 baths, dining saloon and large deck saloon and crew's quarters, attractively furnished and in first class condition.



No. 1912. For sale or charter—this commodious 77′ houseboat, speed 10 miles. Has 4 staterooms, 2 baths, dining saloon and deck sitting room. Completely equipped and in splendid shape throughout.



No. 8750. For sale or charter—this 83 foot motor yacht. Twin screw motors give speed of 12 knots. Has two double staterooms, main saloon and large deck dining saloon. Equipment and furnishing very complete.



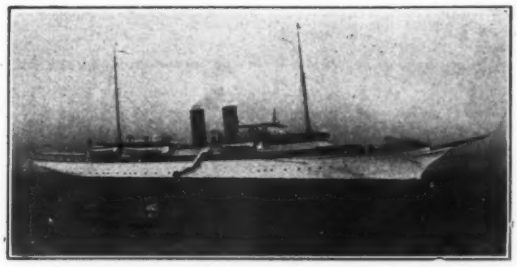
No. 8205. For sale—this attractive 50-ft. raised deck cruiser with twin-screw motors of 50 H.P. each. Has cabin with two berths, toilet, galley and crew's quarters.

Advertising Index will be found on page 166

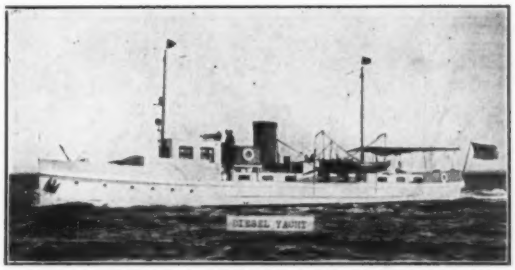
R. M. HADDOCK

NAVAL ARCHITECT MARINE INSURANCE YACHT BROKER

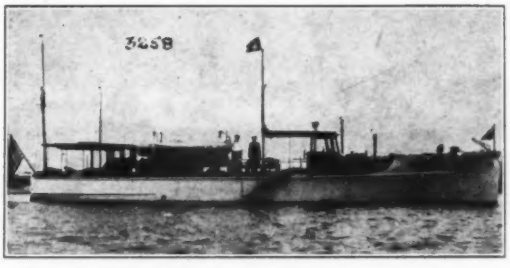
50 EAST 42nd STREET, NEW YORK CITY TELEPHONE, VANDERBILT 1409



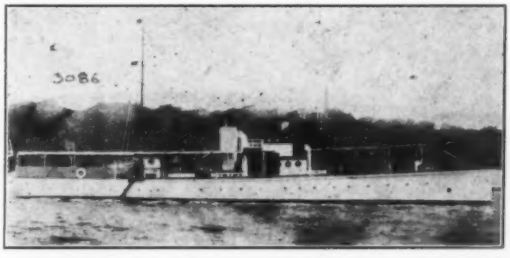
No. 130—FOR SALE—Large seagoing steam yacht, 263' x 29' x 16' draft. Palatial accommodations. Owner will sacrifice for immediate sale. For further particulars, apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 3017—FOR SALE—Diesel Motor Yacht, 77' x 14' x 6' draft—cruising radius 1600 miles at 10 knots. Two double staterooms and saloon. Deckhouse. Can be operated at one-half the cost of gas driven vessel same size. All motor controls on the bridge. For further particulars apply to R. M. HADDOCK, 50 East 42nd Street, New York City.

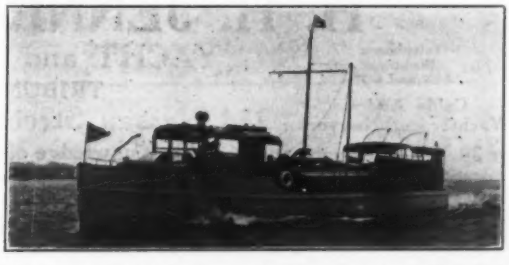


No. 3258—FOR SALE—Twin screw motor yacht, 70' x 14' x 3' 6" draft. New 1924. Two Speedway motors, speed up to 18 M. P. H. Accommodations consist of two double staterooms, bath room, large dining saloon forward; one of the finest yachts of her type available. For further particulars, apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

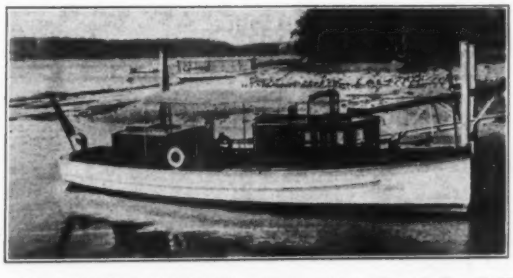


No. 3086—FOR SALE—Fast twin screw flush deck motor yacht, 127' x 18' x 6' draft. Standard motors speed up to 23 M. P. H. Two double and one single stateroom. Two baths, etc. Price attractive. For further particulars apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

No. 4082—FOR SALE—Bridge deck cruiser, 38' x 10' x 3' draft. Speed up to 12 M. P. H. Sleep 4-6 persons. Perfect condition. Price reasonable. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 313—FOR SALE—One of the most attractive bridge deck motor yachts now available. Two Sterling motors speed up to 25 M. P. H. Accommodations consist of double stateroom, large saloon fitted with Pullman berths, toilet and bath. Electrical equipment more complete than any yacht of her size. Exceptional amount of deck space. Suggest quick action if interested. Boat can be seen at New York City. For further particulars apply R. M. HADDOCK, 50 East 42nd Street, New York City.



No. 4251—FOR SALE—Bridge deck cruiser, 40' x 9' 6" x 3' 3" draft. Speedway motor speed up to 12 M. P. H. Sleep four persons. Price attractive. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

No. 4141—FOR SALE—Bridge deck cruiser designed and built by Herreshoff 1915. Sleeps 6 persons, 32' x 8' 6" x 3' draft. Speed up to 10 M. P. H. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

THOMAS S. HANSON

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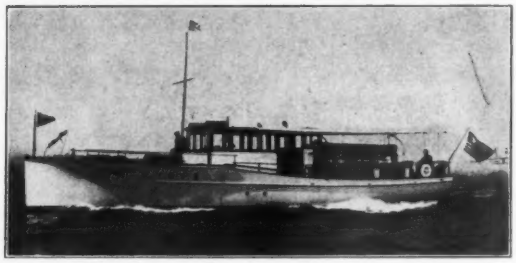
Formerly General Manager of The Elco Works, of Bayonne, N. J.

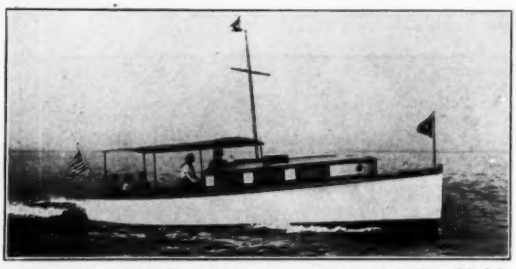
19 WEST 44th STREET Telephone Murray Hill 8676 NEW YORK CITY

I have a carefully selected list of all sizes and types of Boats and Yachts.

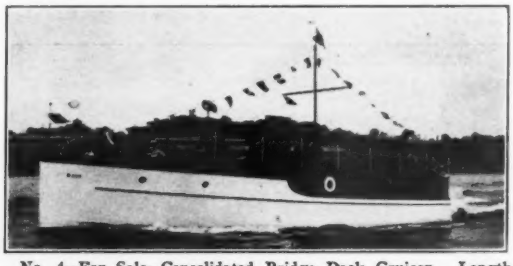
No. 1—For Sale—Cruiser with Protected Bridge Deck. Length 45 ft. Beam 11 ft. Draft 2 ft. 10 in. Cruising Speed 11 miles. Comfortable boat, good design and arrangements, in an attractive condition.



No. 2—For Sale—Elco Twin Screw Deck House Cruiser. One of these splendid boats of the Latest Model. Length 56 ft. Has the three Staterooms. Description of boat, condition and price, on request.



No. 3—For Sale—Elco Cruisettes, 33-foot and 34-foot Models. Selected number of these famous Cruisers which have proved so successful. Description of the boats, their condition and prices, on request.



No. 4—For Sale—Consolidated Bridge Deck Cruiser. Length 52 ft. Beam 11 ft. 150 H.P. Speedway engine. Very desirable boat where seaworthiness and unusual speed are desired, in combination with good cruising accommodations. Speed 16 miles.

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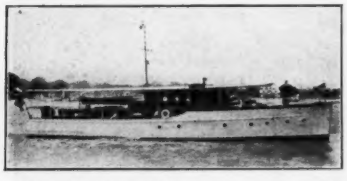
Our 30 Years' Experience and Our Knowledge of the Yachts We Offer, Insure Satisfaction to Clients.

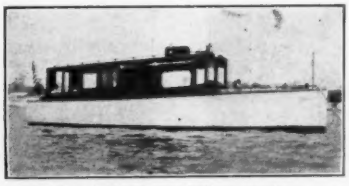
No. 2105—43 foot Express Day Cruiser, 8' beam; 2' draft. Construction Mahogany throughout. Transom seats in cabin. Toilet room. 45-75 H.P. Sterling Motor. Speed 20-22 miles. Electric lights, etc. Is controlled like an automobile. Good proposition.

No. 4517—Sale or charter. Twin screw House boat 70' x 16' 6" x 3' 6". Three double and one single stateroom. Large deckhouse containing dining and living room. Two toilets and bath. Two 70-80 H.P. motors. Speed 12-14 miles. Hot water heat. Electric lights, etc.

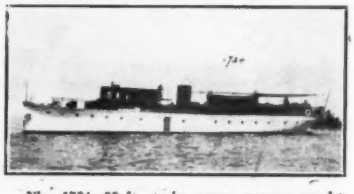
No. 1847—Twin Screw Express Cruiser. 60' 9" x 11' 6" x 3' draft. Double stateroom; two berths in main cabin. Bathroom, etc. Berths and toilet for crew. Two 150-200 H.P. Sterling Motors. Speed up to 25 miles. Electric lights, etc. Strictly high class outfit. Splendid seaboat.



No. 2584—65 ft. Twin screw power yacht. Two double staterooms, dining saloon and roomy deckhouse. Two toilets and bath. Two sterling Motors. Speed 13-14 miles. Electric light. Hot water heat, etc. Splendid proposition.



No. 2552—30 foot Sedan Cruiser. V Bottom. 8 ft. beam; 2 ft. draft. Built 1922. Well built. Cedar planked; copper fastened. Cabin inside and out; also decks of Philippine mahogany. 35 H.P. Fiat Marine Motor. Speed up to 17 miles. Electric lights, etc.



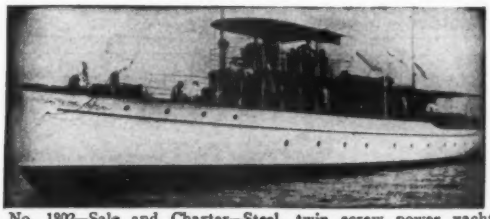
No. 1724—90-ft. twin-screw power yacht. Heavily constructed. Splendid seaboat. Two double staterooms. Main saloon with two berths. Lobby with berth. Dining saloon. Two toilets and bath. Two 60-80 H.P. motors. Speed, 11-13 miles. Electric lights, etc. Good proposition.

Advertising Index will be found on page 166

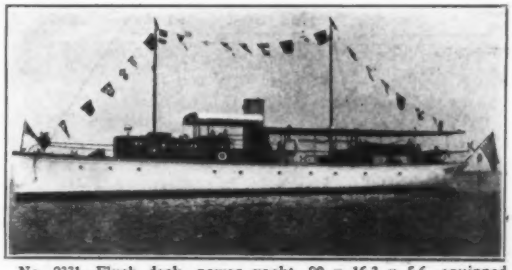
WILLIAM GARDNER & CO.

Naval Architects, Marine Engineers and Yacht Brokers

Phone 8628 Bowling Green — No. 1 BROADWAY, NEW YORK — Cable Address: Yachting, N.Y.



No. 1802—Sale and Charter—Steel, twin screw power yacht, 110' x 16'; two 6-cylinder Standard motors. Very large deck house and exceptional owner's accommodations. Plan and full details gladly submitted.



No. 2331—Flush deck, power yacht, 90 x 16.3 x 5.6, equipped with two 6-cylinder Winton motors, has excellent accommodation and of staunch construction.

No. 2334—For Sale—Attractive 85 ft. twin screw Lawley built power yacht, two 6-cylinder 200 H.P. Sterlings, speed 16 miles. Splendid accommodation and everything in A-1 condition.

No. 1719—Power cruiser 66 x 13' 4", six cylinder motor, speed 12 miles, deck dining saloon, and comfortable owner's quarters.

WILLIAM GARDNER & CO. HAVE A COMPLETE LIST OF YACHTS OF EVERY DESCRIPTION FOR SALE AND CHARTER. PLANS, PHOTOS, AND FULL PARTICULARS FURNISHED ON REQUEST

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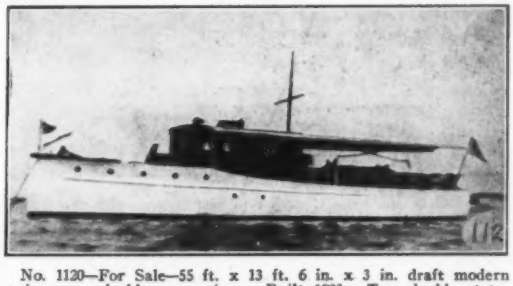
WE HAVE A COMPLETE LIST OF ALL STEAM AND POWER YACHTS, AUXILIARIES, AND HOUSEBOATS, WHICH ARE FOR SALE AND CHARTER. Plans, photographs and full particulars furnished on request.

No. 1058—For Sale—Desirable twin screw cruiser new 1921 92' x 15' x 5'. Powered with two 80-110 H.P. 6 cylinder Winton motors. Large deck dining saloon. Very commodious. Owner's double stateroom with large bath and dressing room. One double and single guest stateroom. Very attractively finished and equipped. Further particulars. Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.



No. 1120—For Sale—55 ft. x 13 ft. 6 in. x 3 in. draft modern twin screw deckhouse cruiser. Built 1923. Two double staterooms. Two medium duty 6 cylinder Scripps motors. Very attractive price for immediate sale. Henry C. Grebe & Co., Inc., 6 N. Michigan Avenue, Chicago, Ill.

No. 1057—For Sale—Twin screw. New 1921; 50 ft. x 12 ft. x 3 ft.; very complete and in excellent condition. Sleeps six comfortably in owner's quarters. Has comfortable deckhouse and roomy afterdeck. Reasonable price. Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.

No. 1044—For Sale—Twin screw modern cruiser. 18'x13'x3' 6". Speedway engines. Speed 16 miles. Two double, one single stateroom, two baths. Beautifully finished and furnished. Further particulars and price from Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.

No. 1018—For Sale—54 ft. Great Lakes express cruiser. New 1922. Speed 20-25 miles per hour. Double stateroom and large main saloon. Two toilets and shower bath. Well equipped and in excellent condition. Henry C. Grebe & Co., Inc., 6 North Michigan Avenue, Chicago, Ill.

FRANK BOWNE JONES

Telephone Whitehall 1170

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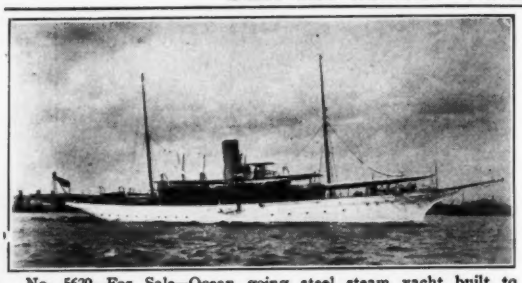
Cunard Building, 25 Broadway, New York

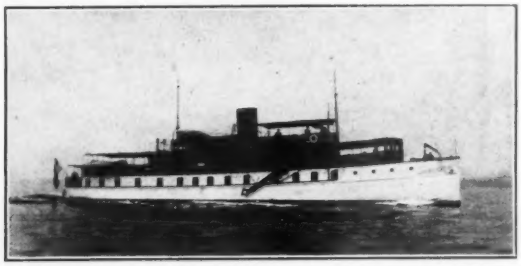
OFFICE No. 1051

Cable Address "Windward," N. Y.

Sales and Charters—Naval Architecture—Marine Insurance

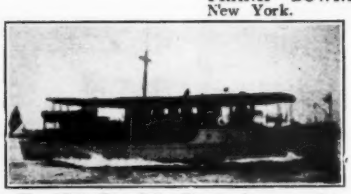


No. 5620—For Sale—Ocean going steel steam yacht built to Lloyd's highest rating. A number of larger and smaller yachts of similar type. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

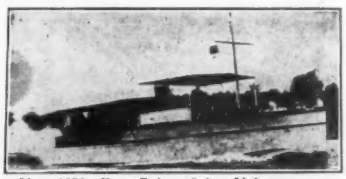


No. 2277—For Sale or Charter—Power house yacht. Length 115'. Recent build. Probably the best yacht of this size and type. Commodious accommodations. Handsomely fitted. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

No. 7242—For Sale—73-ft. twin-screw power yacht. Recent build. Sterling motors. Excellent accommodations. Speed 15 to 18 miles. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



No. 4704—For Sale—Power house yacht, 67 ft. long. Best design and build. Practically new. Now on way North. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York City.



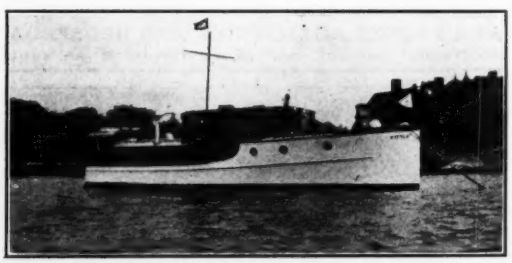
No. 5572—For Sale—60-ft. V-bottom express cruiser. 2GR Sterling motors. Bridge deck. Double stateroom, large saloon, bath. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York City.

Telephones Vanderbilt { 8566 / 8415

RIGG'S YACHT AGENCY

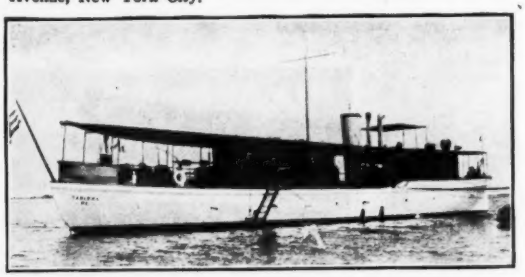
350 MADISON AVE. (AT 45th ST.), NEW YORK

Cable Address "Rigging"

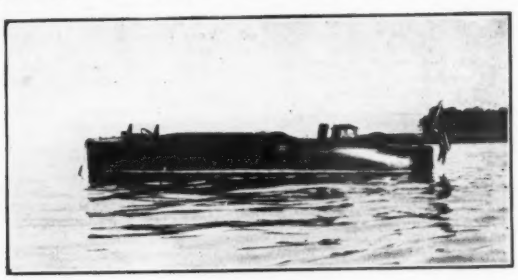


FOR SALE—No. 1260—Modern type fast cruiser with two separate cabins and enclosed bridge deck. Dimensions 45' x 10' 4" x 2' 9" draft. Built by the Rochester Boat Works in 1920. Sterling Motor, 125 HP, with electric starter. Accommodations include stateroom with two upper and two lower berths, also large saloon. Two toilets and separate quarters for a man. Location, New York. Price and further particulars from RIGG'S YACHT AGENCY, 350 Madison Avenue, New York City.

FOR SALE—No. 718—In commission and ready for delivery this splendid bridge deck power cruiser. Two separate cabins with bridge deck between. All in perfect condition. Very low price. Apply Rigg's Yacht Agency, 350 Madison Avenue, New York City.



FOR SALE—No. 742—Sturdy seagoing type cruiser, 112' x 15' 6" x 5' 8". Built by Lawley, five staterooms, dining saloon and social hall. Standard motors. Sacrifice price for quick sale. Apply Rigg's Yacht Agency, 350 Madison Avenue, New York City.



FOR SALE—No. 1346—Exceptional opportunity to purchase Gar Wood express runabout, 26 feet long. Gar Wood Fiat motor, 300 HP, with plated water jackets, speed up to 45 miles per hour. Two cockpits seating seven comfortably. Boat and engine in perfect condition. The owner has purchased larger yacht through us and will make reasonable price for quick sale. Apply Rigg's Yacht Agency, 350 Madison Avenue, New York City.

Advertising Index will be found on page 166

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Cable Address Yachtsan, N. Y.

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YACHT BROKER
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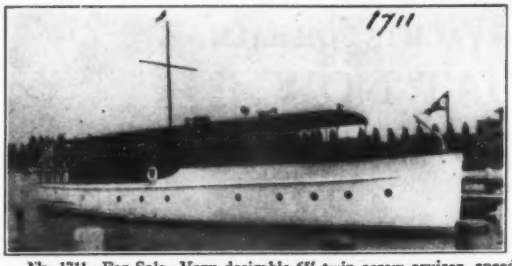
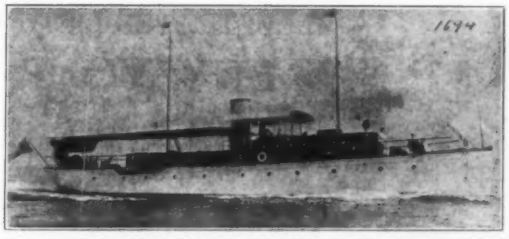
501 FIFTH AVENUE (42d ST.), N. Y.

Our Motto: "To offer yachts, whether large or small, which will be a pleasure for you to own and a recommendation for us to sell; to render such service as to have you feel you would like to do business with us again."



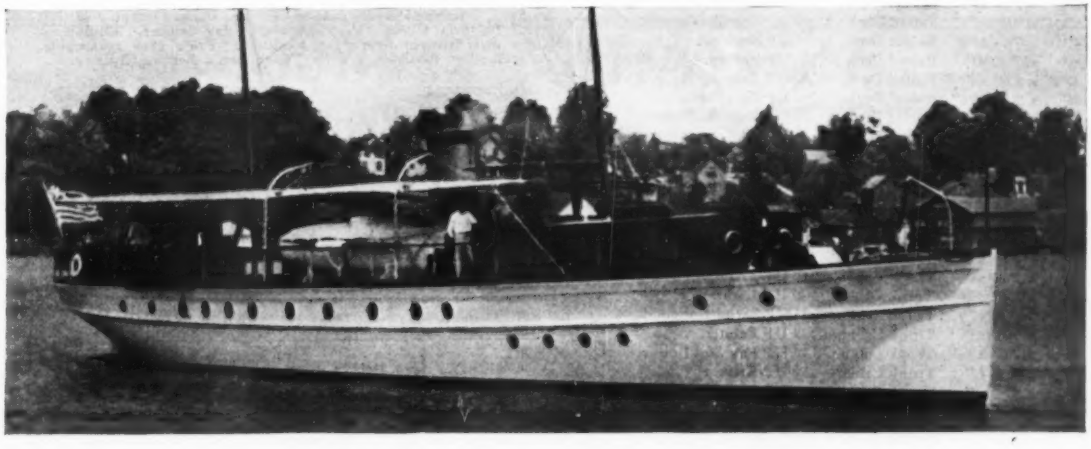
No. 1711—For Sale—Very desirable 65' twin-screw cruiser, speed 15 miles. 2 roomy double staterooms, bathroom and deck dining saloon. Fine galley. Hot water heating plant. Built in 1924 and one of the finest yachts of her length available.



No. 1694—For Sale—Attractive 90' twin-screw cruiser. Speed 13-14 miles. 3 comfortable staterooms, deck dining saloon, bath, etc. Winton 100 H.P. motors. Able, seaworthy and has had unusually good care. Can be recommended very highly.

No. 1629—For Sale—50' Express cruiser, twin-screw, with a speed of 30 miles per hour. Has 2 berths for owner, galley, etc. Of the highest type of construction, having a mahogany hull. A marine Rolls-Royce.

No. 1783—For Sale or Charter—60' twin-screw houseboat, built in 1922. Has 2 single and 2 double staterooms, deck dining saloon, bathroom, etc. A well-arranged yacht, roomy, comfortable and able.



SYLVIA III FOR SALE—

99′ O.A., 15′9″ Beam, 4′9″ Draft

An exceptional opportunity to purchase a Herreshoff designed and built cruiser, built at Bristol, R. I., in 1922, of selected material. Planking of 2-inch yellow pine, extra heavy framing, with steel straps and girders.

Large deckhouse, panelled outside with fine grade mahogany, containing galley and dining saloon—the dining saloon being panelled in black walnut. The owner's and guests' quarters are below, consisting of three large double staterooms with bath rooms adjoining. These staterooms are finished in white enamel and walnut. There is also a large saloon below decks which is panelled in black walnut.

This craft is powered with two eight cylinder 6″ x 9″ Silent Loew-Knight Gas Engines, which are free from vibration and noise, guaranteed in perfect working order, and give the boat a cruising speed of 13½ miles per hour and a reserve speed of 15 miles per hour.

A 5 K.W. lighting plant furnishes illumination for the entire boat. An automatic water pressure system supplies running water—both hot and cold—to all baths and lavatories. There are electric heaters in each room, electric anchor windlass, refrigerating plant—in fact everything to add to the convenience in operating and the comfort of the owner.

The "SYLVIA III" has always been kept in the owner's private boat house and has received the care and attention of experienced men. We are now designing a new and larger yacht for the owner and for this reason she has been placed on the market. Only a personal inspection of the boat by a prospective purchaser can do justice to the wonderful condition and appointments of the craft. Any further particulars that may be desired can be had by applying to JOHN H. WELLS, Inc., 347 Madison Avenue, New York City.

YACHTSMEN'S SERVICE AGENCY

1233 Real Estate Trust Building, Philadelphia, Pa.

Phone: Walnut 4830

ILLUSTRATED LISTING OF YACHTS FOR SALE

BUY YOUR BOAT NOW

Classified Listing

120′	x14′4″	x5′	Steel Hull.	(2) 200 HP Wintons.
110′	x18′	x6′6″	Wood Hull.	(2) 180 HP Craig Deisels.
110′	x14′11″	x5′5″	Gov. Hull.	(2) 250 HP Standards.
80′	x14′	x3′7″	Wood Hull.	(2) 200 HP Van Blercks.
80′	x14′	x3′6″	Wood Hull.	(2) 275 HP Standards.
78′	x14′	x3′6″	Wood Hull.	(2) 254 HP Standards.
71′	x16′5″	x4′	Wood Hull.	90 HP Standard.
68′6″	x13′	x3′	Wood Hull.	(2) 40 H P Lambs.
65′	x14′	x4′7″	Wood Hull.	80 HP Winton.
64′	x12′	x4′6″	Wood Hull.	50 HP Sterling.
64′10″	x14′	x3′10″	Wood Hull.	(2) 100 HP Sterlings.
58′6″	x12′	x4′	Bridge Deck.	90 HP M. & T.
57′	x11′4″	x3′6″	Bridge Deck.	37 HP Standard.
52′	x11′3″	x3′	Bridge Deck.	150 HP Speedway.
50′8″	x10′10″	x3′6″	Bridge Deck.	37 HP Standard.
50′3″	x10′7″	x4′	Bridge Deck.	50 HP Sterling.
48′9″	x12′	x3′	Bridge Deck.	(2) 24 HP Palmers.
40′	x12′	x3′	Bridge Deck.	16 HP Standard.
40′	x10′	x3′	Bridge Deck.	55 HP Sterling.
38′	x10′8″	x3′	Bridge Deck.	(2) 20 HP Engines.
38′	x10′	x3′3″	Bridge Deck.	24 HP Palmer.
33′	x 9′5″	x3′	Bridge Deck.	40 HP Frisbie.

Raised Deck Cruisers

60′	x15′7″	x4′6″	Raised Deck.	75 HP Murray & Trequrtha.
57′	x11′	x3′4″	Raised Deck.	55 HP Standard.
50′	x10′	x3′5″	Raised Deck.	60 HP Speedway.
41′	x10′	x3′6″	Raised Deck.	65 HP Sterling.
40′	x12′	x3′	Raised Deck.	30 HP Vulcan.
37′2″	x 8′6″	x3′	Raised Deck.	40 HP Engine.
36′	x 9′	x2′6″	Raised Deck.	150 HP Speedway.
33′	x 8′6″	x3′	Raised Deck.	50 HP Fay & Bowen.
41′	x10′6″	x3′	Raised Deck.	20 HP Hall.

Trunk Cabins

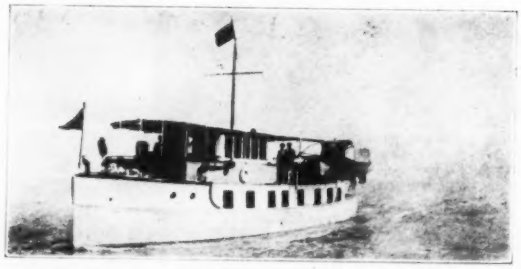
59′6″	x12′4″	x2′9″	Trunk Cabin.	50 HP Harris.
50′	x13′	x3′6″	Trunk Cabin.	37 HP Standard.
46′	x11′6″	x3′4″	Trunk Cabin.	60 HP Frisbie.
36′	x10′6″	x2′9″	Trunk Cabin.	40 HP Lathrop.
33′	x 9′	x2′9″	Trunk Cabin.	35 HP Scripps.
30′	x 9′8″	x3′	Trunk Cabin.	12 HP Palmer.
30′	x 7′6″	x2′6″	Trunk Cabin.	72 HP Fay & Bowen.
28′6″	x10′	x3′	Trunk Cabin.	20 HP Knox.
22′	x 6′	x2′	Trunk Cabin.	6 HP Cailee.

Express Cruisers

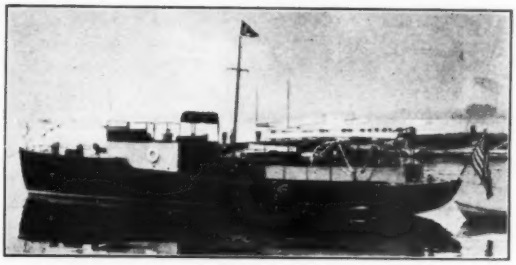
66′	x11′4″	x3′2″	Exp. Cruiser	(2) 200 HP Van Blercks.
52′	x11′4″	x3′4″	Exp. Cruiser	(2) 135 HP Speedways.
45′	x10′4″	x2′9″	Rochester.	85 HP Sterling.
42′	x 9′	x2′11″	Lawley Cruiser.	300 HP Sterling.
36′	x 8′2″	x2′11″	Trunk Cabin.	125 HP Hall Scott.

Auxiliaries

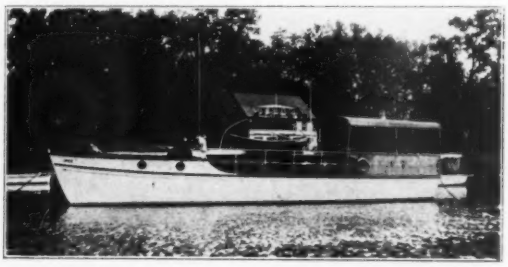
63′6″	x15′6″	x4′	Aux. Yawl.	40 HP Scripps.
49′6″	x14′	x3′	Aux. Sloop.	16 HP Frisbie.
44′	x13′	x5′	Aux. Yawl.	12 HP Palmer.
39′6″	x13′	x3′6″	Aux. Sloop.	16 HP Standard.
40′10″	x14′	x5′6″	Aux. Schooner.	12 HP Lathrop.
31′10″	x11′6″	x5′	Cat Ketch.	7 HP Frisbie.
40′	x10′	x3′	Bugeye Sch'r.	7 HP Regal.



70′x16′8″x2′3″ Powered House Boat. 2 6-cylinder Sterling engines; 3 state rooms—1 double and 2 single; 2 baths, large dining salon, and deck salon. Boat in good condition. For further particulars, write Yachtmen's Service Agency.



52′9″ Lawley Double-planked Bridge Deck Cruiser. 40 HP 1922 Lathrop Motor. Very handsome day cruiser. Equipment new and boat in first-class condition. Price very reasonable. For further particulars write, Yachtmen's Service Agency.



43′x10′x3′ Raised Deck Cruiser. 40 HP Lathrop Motor. 187-gallon gas capacity. Copper Tank. 200-Gallon water capacity. Double state room, salon and double cockpit. Boat in fine condition. For further particulars, write Yachtmen's Service Agency.

30′ Sedan. 30 HP 1923 Wisconsin. Cockpit enclosed with curtains, extension berth in cabin. Ideal boat for short week-end trips. Will sell at a bargain. For further particulars, write Yachtmen's Service Agency.

Advertising Index will be found on page 166

Chester A. Nedwidek

CHARLES · D · MOWER

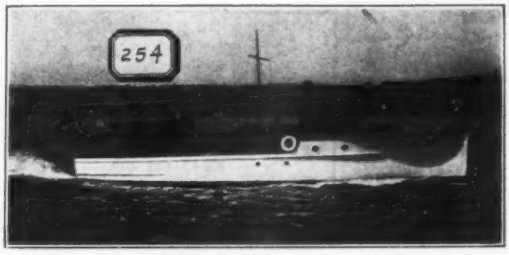
Naval Architect

350 MADISON AVENUE
at Forty Fifth Street
· NEW YORK ·

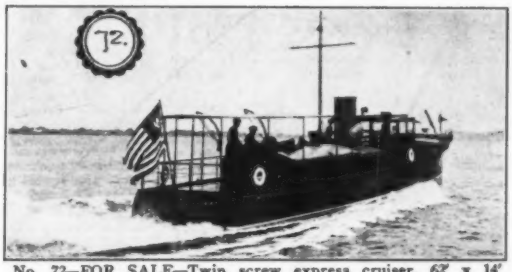
E. P. Nevin

Yacht Brokerage
Marine Insurance

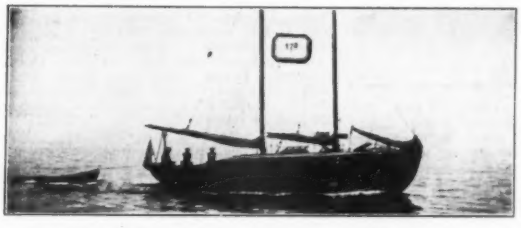
Telephone
Murray Hill 3748



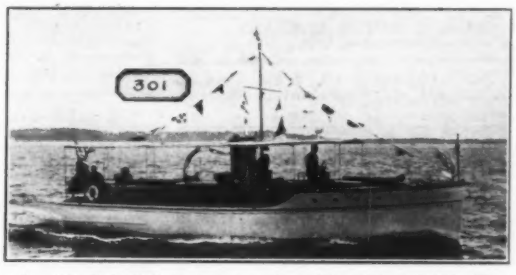
No. 254—FOR SALE—Bridge deck cruiser, new this year, 46' x 11' x 3' 3". Excellent accommodations. Charles D. Mower, 350 Madison Ave., New York City.



No. 72—FOR SALE—Twin screw express cruiser, 62' x 14' x 4'. Sterling Engines. Fine cruising accommodations. Full equipment. Speed 18 to 26 miles per hour. Charles D. Mower, 350 Madison Ave., New York City.



No. 172—FOR SALE—Auxiliary cruising schooner, 39' x 32' x 11' 10" x 4'. Mower design, built 1923. Double stateroom, large main cabin, comfortable cruising boat. Charles D. Mower, 350 Madison Ave., New York City.



No. 301—Raised deck power cruiser, 45' x 11' x 2' 10". Two double staterooms, two toilet rooms. Able, comfortable, seaworthy cruiser. Speed 10-12.

SOUTHERN YACHT AGENCY

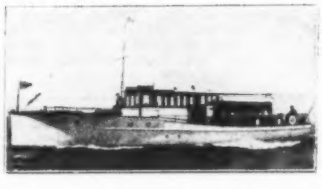
1001 American Building **Phone: Plaza 3787**

BALTIMORE, MD.

YACHTS FOR SALE AND CHARTER
MARINE INSURANCE

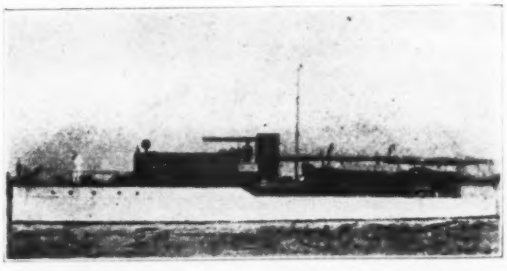
NAVAL ARCHITECTURE
AND ENGINEERING

FOR SALE—53 ft. Express Cruiser in first class condition. For prompt sale will sell at price that will surprise you. SOUTHERN YACHT AGENCY, American Building, Baltimore, Md.

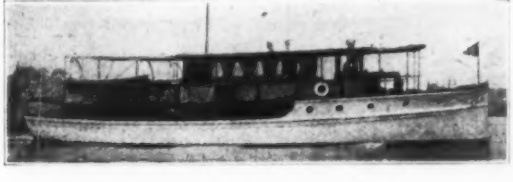


FOR CHARTER—56 ft. Elco Cruiser; twin screw. Exceptionally large accommodations. Perfect condition. SOUTHERN YACHT AGENCY, American Bldg., Baltimore, Md.

65 ft. twin screw cruiser. Built 1923. Practically brand new and in perfect condition. Two 150 h.p. speedways. Will sell at sacrifice as owner building larger yacht. SOUTHERN YACHT AGENCY, American Building, Baltimore, Md.



FOR SALE—82 ft. Lawley Cruiser. In perfect condition. Sell at one-third cost. A chance to pick up one of the best bargains offered. SOUTHERN YACHT AGENCY, American Building. Baltimore, Md.



FOR CHARTER— 67 ft. twin screw cruising houseboat. Four double staterooms. Two bathtubs. Hot and cold running water. All furnishings and equipment of best quality. The best yacht of type available. Charter for Chesapeake or northern waters. Attractive price. SOUTHERN YACHT AGENCY, American Building, Baltimore, Md.

THE MOTOR BOATING MARKET PLACE

The rate for "For Sale" and "Want" advertisements is 8 cents per word, minimum $2.00. If an illustration is used, the charge is as follows, which includes the making of the cut:

Cut one inch deep, two inches wide	$ 9
Cut 1½ inches deep, three inches wide	$12
Cut 2¼ inches deep, four inches wide	$20
Cut 2¼ inches deep, six inches wide	$25

Opportunities for the Motor Boatman

Before you buy or before you sell examine the exceptional buying and selling opportunities under this heading. They comprise the best offers of the month. Please mention MoToR BoatinG.

MoToR BoatinG, 119 West 40th St., New York

Classified advertisements set entirely in small light face type. No extra charge for capitals. Bold face type used at display rate, $12 per inch, single column. New advertisements can be accepted up to twelfth of month for following issues.

Four cyl., four cycle, with reverse gears—Clifton 8½ x 11, $750. Buffalo, 5½ x 7, $850. 5¼ x 7 Miller, $450. 5 x 6 Van Blerck, $255. 5 x 7 Wisconsin, $365. 4¼ x 6 Doman, $315. New 5¼ x 7 Model, $425. 4 x 4 Kermath with electric starter, $345. 3⅝ x 4 Model Z Gray with electric starter, $285. 4½ x 5 Truscott, $235. Universal 2⅝ x 4, $185. New Erd tractor 4 x 6, $235.

Eight cyl. 5½ x 6½ Van Blerck, $550. 5½ x 5¾ Sterling six, $485. 3 cyl. 7⅝ x 8½ Wolverine, $485. 6 x 6 Truscott 3 cyl., $265. 4¼ x 6½ Doman, 2 cyl., $225. Anderson 14 h.p. 2 cyl., $275. 7 h.p. Frisbie 1 cyl 6 x 6, $165.

Two cycle engines: 75 h.p. 6 cyl. Fox, $275. 3 cyl. 5 x 5 Vim, $185. 3 cyl. 5 x 5 Ferro, $175. 3 cyl. Gray Model T 4 x 4, $145. 3 cyl. Fairbanks-Morse 4½ x 4½, $95. 3 cyl. 4 x 4 Pierce Budd, $225. 4 cyl. Waterman 2⅝ x 3, $135. Erd 10 h.p. 2 cyl., $70. Motorgo 6 h.p. 2 cyl., $65. 1 cyl. 5½ h.p. Ferro, $45. Small outboard and inboard motors, $30 to $50.

BADGER MOTOR COMPANY
Milwaukee, Wis.

For Sale: Eighteen 1 cyl. 2 h.p. Outboard Motors, $20 and up. Jesiek Bros., Macatawa, Mich.

FOR SALE

Chesapeake Bay Rig Sloop, 38x10x3-ft. draught, built of cedar and of solid timber; Sterling motor, 30-45 H.P., 5½x6-inch stroke. Boat is 5 years old, has 20-ft. cabin, 4 berths, and equipment is in perfect condition. Price, $1,700.00. Seen Rais, North Beach, Flushing Bay, or write F. Hurtig, 29 Center St., Little Ferry, N. J.

FOR SALE—New Red Wing Thorobred Marine Motor Model B, 32 horse, magneto, no reverse gear or clutch—cheap. Wm. Wetterlin, Diamond Bluff, Wis.

FOR SALE

Open launch "Princess," 26 ft. 4 in. x 7 ft. 4 in. 12 to 15 passengers comfortably. Bridgeport 2-cyl. 14 h.p. motor, little used. Exceptionally seaworthy. 8 miles per hour. Fine for river and sound trips, picnics, fishing. Sacrifice at $575. Now at Bridgeport, Conn. Box 146, MoToR BoatinG, 119 West 40th St., New York.

FOR SALE—Raised deck cruiser, 41'x10', Sterling engine, 85 H.P. Electric lights. Fully equipped. Speed, 12 miles. Bargain at $3,000. W. J. Maloney, 1010 S. Broome St., Wilmington, Delaware.

BARGAINS in several used engines and equipment. A. M. DEERING, 1642 Monadnock Bldg., Chicago.

FOR SALE OR RENT

Complete Boat Works and Machine Shop with 242 feet deep water frontage near New York. BEST LOCATION FOR BUSINESS IN AMERICA. Between two steamer landings of New York Boats. Within two blocks of two railroad stations and near several steamers. Easily, quickly accessible by rail, steamers, or magnificent concrete roads for motorists. Within few miles richest clientele in the world. Owner retiring. Last occupant made huge profits. Very low rental or sale price, long term payments to builder of very fast boats. Address Paine, 36 Clinton St. Newark, N. J.

Bargains: Rebuilt marine engines. One to 6 cylinders. Motor and row-boats we have taken in trade. Send for list. Dept. "D," Everett Hunter Boat Co., McHenry, Ill.

For Sale: Runabout Panhard, Mississippi Valley Champion 1921. Electric Starter, etc. Ready to run. Also motors, all kinds, 25 to 40 Horsepower, including Erd 30 Horsepower. F. T. Holiday, Indianapolis, Ind.

FOR SALE—Raised deck cruiser, 30' O.A., 8'6" beam, 3' draft, 20 H.P. Kermath motor, sleeps four persons. One of the finest little cruisers now available. Don't delay looking this craft over if in the market for a good boat. R. M. Haddock, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

FOR SALE—Twenty-foot motorboat, model hull, Universal engine, magneto, rear starter, reverse gear, automobile steering, bronze shaft log, Hyde propeller. Only $250. Dr. Ferstenberg, Clinton, Iowa.

DODGE 22' runabout, with Kermath 50 H.P. engine, new, $1,950. Racine 19' runabout, with 16 H.P. Kermath engine, only used 25 hours last season. Owner purchasing much larger, faster boat. Cost, $2,000; price, $1,200, at White Fish Lake, Michigan. Kermath Manufacturing Company, 5890 Commonwealth Ave., Detroit, Michigan.

FOR SALE—76-ft. power yacht. Speed, 12½ miles. 65-75 Standard engine, engine used very little. Electric lights. Bridge control. 700-gallon gasoline tank. 1 row boat. 1 power tender. Will sell at sacrifice. R. P. Dobson & Company, Paca and Saratoga Sts., Baltimore, Md.

AUXILIARY YAWL, 46' x 14' x 3', new 20 H.P. Kermath motor, electric lights, double stateroom, full head room throughout, sleeps eight. Bargain. DR. HALL, Trenton, N. J.

New Cruiser for Sale 49½ x 11'

IMMEDIATE DELIVERY

Ditchburn Boats, Ltd., Gravenhurst, Ont., Can.

HULL—V-bottom runabout, 21x5; A-1 condition; complete, except motor; auto control; all bronze and brass equipped; Paragon gear. Just the boat for light 16-20 H.P. motor. $200.00 cash. A. Drewitz, Newburgh, N. Y.

FOR SALE—Hacker 24-foot Mahogany runabout. Front and rear cockpits equipped with late model 4-cylinder, 70-H.P. Kermath Motor. Electric Starter. Bosch electrical equipment. All in perfect order ready to run. The finish is perfect. Looks like a new Boat. Cost $3,500, fully equipped. Speed better than 25 miles per hour. Handles as easily as an automobile and is just as reliable.

Owner purchased a larger boat. Will make a substantial reduction from original price for quick sale.

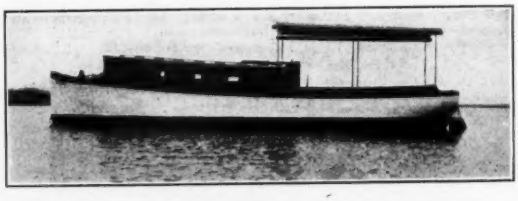
If you want an up-to-date boat at a bargain Write—John J. Gibson—345 Beard Avenue, Buffalo, N. Y.

WANTED POSITION—Captain-engineer yacht. American. 10 years Lakes and coast. 3 years yachts. Handled most makes of marine engines. Licensed Lakes. References. Geo. Redden, 5910 Pear Ave., Cleveland, Ohio.

FOR SALE—30' x 8' Palmer cruiser. 20 H.P. Kermath motor. Mahogany finish. Fully equipped, electric lights. Excellent condition. For particulars write George Bogart, 74 Bristol St., New Haven, Conn.

FOR SALE

Three hundred H.P. Murray-Tregurtha, 1650 revolutions. Engine complete. A-1 condition. Used very little. Can be tested on stand before purchase. Engine not used over thirty hours since purchase. Owner installing two new engines in boat reason for selling. Cost new approximately seventy-five hundred dollars. Can be bought reasonable. Box 147, MoToR BoatinG.



NEWLY CONVERTED NAVY HULL

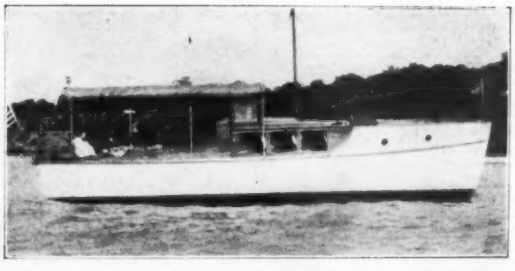
33'x9'6"; Speed, 10 M. P. H.

New 32-40 Red Wing Under Self-Bailing Cockpit. Mahogany Cabin—Spruce Decks—Clothes Closet—Dresser—Spring Berths—Ice Box—Pantry—Dish Closet—Sink—Wash Basin—Toilet Room—Book Shelves.

HANDSOME—ABLE—ROOMY

$2,500. (Time Payments N. Y. C. and Vicinity)

J. WORTSMANN, 154 Nassau Street, New York



Will sell 31' by 8' 6" raised deck cruiser with four cylinder Gray engine. Electric equipment. Completely overhauled; in commission. Price moderate. W. H. Scherr, 961 St. Nicholas Avenue, New York, N. Y. Wadsworth 6654.

Advertising Index will be found on page 166

REBUILT ENGINES

Does the old motor need new bearings? Is the compression getting poor? Is it getting noisy? Dirty? We can show you how it is actually cheaper to install one of our guaranteed rebuilt motors than to repair the old one. All sizes, types and makes.

Put your engine problem up to us.

BRUNS KIMBALL & CO., Inc.

Originators of the Rebuilt Engine

Main Showroom
50-52-54 West 17th St., New York City

Branch
102 So. 4th St., Philadelphia, Pa.

For Sale—Auxiliary Ketch, 28'5"x7'8", Sea Lure, ex-Caroline A, designed by C. Andrade, Jr. Unusually seaworthy. Economical to run. Accommodations provide more real comfort than any other boat of her size. Sleeps four people. Has galley, stove, sink, icebox, etc. Electric lighted throughout. Long leaf yellow pine planking. Mahogany cabin. Bronze fittings throughout. Powered with heavy duty Lathrop engine, A-1 condition. Speed, 7 m.p.h. Completely equipped. To appreciate this rare bargain buyer must see boat. M. D. Solow, 1123 Broadway, New York.

WHY PAY A NEW PRICE FOR A NEW BOAT? You can buy my new H. B. Cruiser. Designed by Wm. J. Deed. 36 ft. 31-H.P. Lathrope. Forward and Aft Cabins. Bathroom. Sleep 7. Launched, August. Run less than 500 miles. Now in commission at Oxford, Tred Avon River, Chesapeake Bay. First offer over $4,000 takes her. Cost me $6,800. This boat built for Florida Cruise that did not materialize. Reason for selling: I need the money. P. O. Box 516, Easton, Maryland.

Would like to get into communication with several gentlemen interested in organizing a high class yacht club near the Naval Academy at Annapolis and the Chesapeake Bay. I have an option on a beautiful piece of land in a wonderful location surrounded by water from fifteen to forty feet deep, and fine harbors. The island is 20 to 60 feet above tide water, with no marshes, beautifully improved and covered with a variety of fine old trees. A most wonderful site for appropriate club buildings. Safe harbor and beautiful rendezvous for yachtsmen visiting the Chesapeake Bay and its tributaries. Write for full information to Milton Roberts, 423 St. Paul Place, Baltimore, Md. Bank references exchanged.

FOR SALE—Mahogany Hull Runabout Speedster; double planked, copper riveted, with spacious passenger room. Equipped with brand new Hall-Scott, 50-70 H.P. high speed marine engine. Will sacrifice for $1,500. Apply V. Strazzera, 1641 79th Street, Brooklyn, N. Y.

FOR SALE: Twenty-eight foot Elco Runabout, equipped with one hundred horsepower Hall-Scott motor and self-starter. For particulars write Waldo C. Johnston, Agent, Cooperstown, New York.

For Sale—25' x 7' trunk cabin cruiser completely equipped. Palmer engine. Box 144, MoToR BoatinG.

FOR SALE—Cruising houseboat, 66x16x3. Was thoroughly overhauled and rebuilt this year. Two new Lathrop 40 H.P. motors installed at a cost of $3,500. Speed ten miles. Entire new outfits of bedding, mattress, new galley stove, silver, dishes, etc. Accommodations not equalled by any boat her size afloat, with four double and one single staterooms, running water, and dresser in every room, 2 baths, and 3 toilets, social hall and dining room. New batteries. Sacrifice $5,000. Mitchell, 421 West 55th Street, New York City.

ELCO CRUISETTE, delivered May, 1924, used seventy-one hours, has been completely refinished inside and out. Motor was taken out and tightened up, and complete outfit is just as good as new. Has catalog equipment and some extras. Will sell for less than is being asked for inferior craft. Thos. F. Wilson, 1200 Eddy Street, Providence, R. I.

WANTED—Bridge deck cruiser, 35-48' long. State age, builder, engineer, speed, all details and lowest cash prices. Send photos and plans. W. S. Corning, 7713 W. VanBuren Street, Forest Park, Illinois.

HIGH SPEED MOTORS FOR SALE. W. C. WOOD COMPANY, 528 UNIVERSITY AVE., S. E., MINNEAPOLIS, MINN.

BOAT FACTORY FOR SALE—On account of old age and sickness I am forced to sell my factory. First class location for good boat builder. For further particulars address T. 25, care of MoToR BoatinG, 119 West 40th Street, New York.

HOME FOR YACHTSMAN, all year 'round, within hundred yards of water, in sight of mooring—stucco house with 10 rooms and 3 baths—2-car stucco garage—excellent vegetable garden—1¼ miles from railroad station. Price, $25,000. Telephone Mamaroneck 1043-W, or address P. O. Box 132, Mamaroneck, New York.

FOR SALE—38-foot Trunk Cabin Cruiser, $2,500.00. Boat is right. For description write Dr. R. Lee Robinson, Newport, News, Va.

STATEMENT of the Ownership, Management, Circulation, Etc., required by the Act of Congress of August 24, 1912, of MoToR BoatinG, published monthly at New York, N. Y., for April 1, 1925.

State of New York } ss.:
County of New York }

Before me, a Notary in and for the State and county aforesaid, personally appeared C. F. Chapman, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the MoToR BoatinG, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, International Magazine Company, Inc., 119 West 40th Street, New York City; Editor, C. F. Chapman, 119 West 40th Street, New York City; Managing Editor, C. F. Chapman, 119 West 40th Street, New York City; Business Managers, C. F. Chapman, 119 West 40th Street, New York City.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.) International Magazine Company, Inc., 119 West 40th Street, New York City; Hearst Publications, Inc., 119 West 40th Street, New York City; Star Holding Company, c/o Corporation Trust Company of America, Wilmington, Del.; W. R. Hearst, Sole Stockholder, 137 Riverside Drive, New York City.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

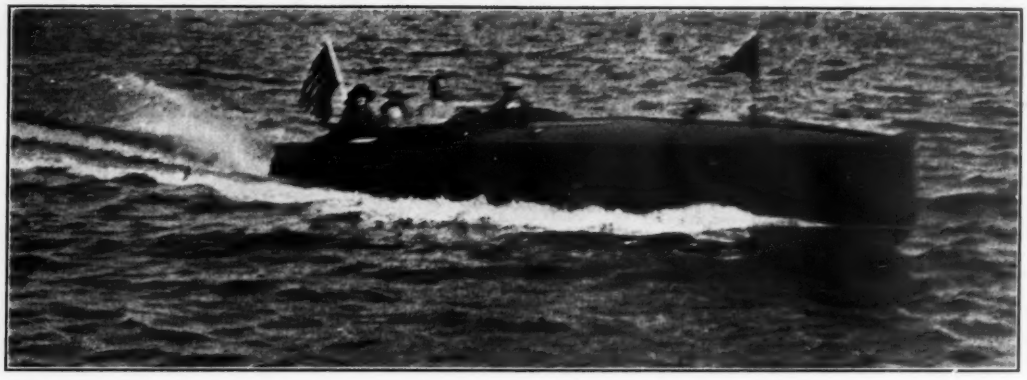
4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

C. F. CHAPMAN, Business Manager.

Sworn to and subscribed before me this 23rd day of March, 1925.

[Seal] WILLIAM J. SPERL.

Notary Public, Queen's County, No. 3717. Certificate filed in New York County, No. 1049; Reg. No. 5832. Commission expires March 30, 1925.



FOR SALE—Gentleman's High Speed Runabout

Hacker V-Bottom Type—Mahogany Construction

This beautiful mahogany runabout will satisfy your desire for speed. It is one of the most successful speedsters designed by John L. Hacker. It is a little more than one year old, seldom used, and is practically new—looks as good as the day it was launched. Thoroughly seaworthy and fully equipped; a good wholesome, practical boat, not merely a racer. A Sterling Sea Gull 150 H.P. engine gives her a speed of 35 miles an hour. The engine is mechanically perfect. Boat can be seen, inspected and delivered immediately. This boat is offered at a price so low as to make it a high-grade bargain for some one who knows real boat value. Owner buying larger boat. Address: Box 132, MoToR BoatinG.

REBUILT STERLINGS

Dolphin Special (GRS) 6 cylinder, 290 H.P. Complete equipment.

Dolphin (GR) 6 cylinder, 225 H.P. Complete equipment.

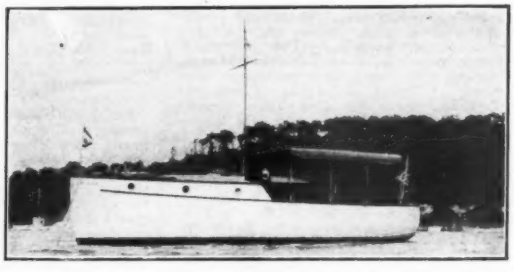
Dolphin (GR) 4 cylinder, 150 H.P. Complete equipment.

Sea Gull—twin pair, 6 cylinder, 150 H.P., rebuilt and retested at Sterling factory. Complete equipment.

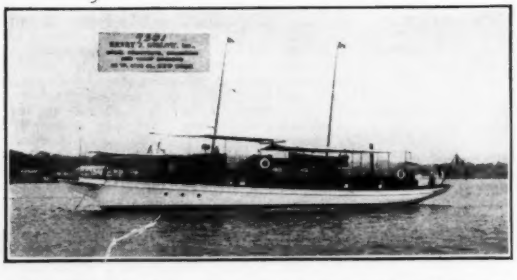
Latest models—sold with an iron-clad guarantee.

BRUNS KIMBALL & CO., Inc.

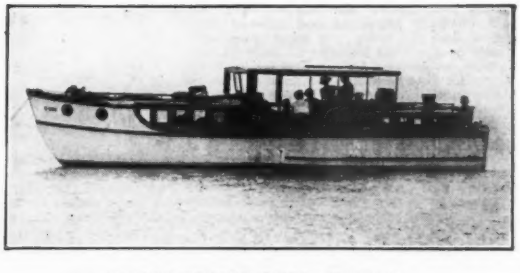
50 West 17th St., New York City



For Sale—32′ x 9′ cruiser with Palmer engine. Practically new, run less than 250 miles. Patented bulkhead construction. Large canopy covered cockpit with upholstered stern seat and four folding arm chairs. Cabin has full head room and is 12′ in length, fully furnished, has four comfortable and wide berths, galley, toilet, etc. Lots of locker room. Boat is completely equipped including wireless receiving set and is ready for immediate cruising. Equipment includes 10′ dink and oars. May be inspected by appointment in New York. This is a rare bargain. Box 145, MoToR BoatinG.



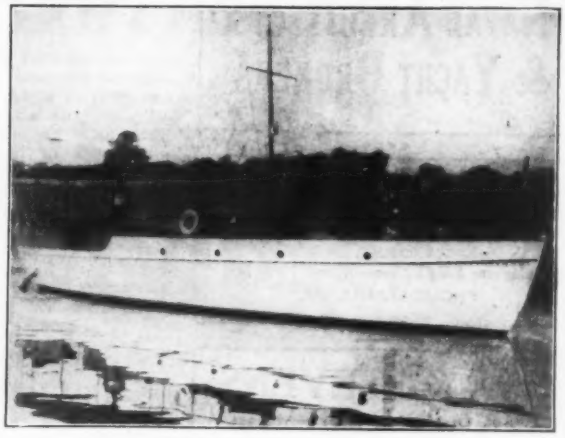
No. 9301. Handsome twin screw trunk cabin cruiser, solid mahogany finish, well kept. Just returned from Florida cruise. 45′ x 12′ 5′ x 3′ 6″. Standard motors give speed 10 miles. Deck house, large saloon, double stateroom, bath. Galley and crew aft. New plumbing 1924. Fully equipped, fine condition. Price low. Henry J. Gielow, Inc., 25 West 43rd Street, New York.



37-FOOT BRIDGE DECK CRUISER

10′ beam, 2′ 6″ draft. Hull copper fastened and planked with Comb-Grained Cypress. Absolutely watertight. Power plant, Sterling Model B, 30-40 H.P. Self starter, Paragon Gear, etc., included. Forward cabin sleeps four, after cabin sleeps two. Complete Galley. Boat now in commission and all equipped. Can be seen by appointment. Mr. C. R. Ross, 12 Cedar Street, New York, or phone John 2723. An absolute sacrifice.

Advertising Index will be found on page 166

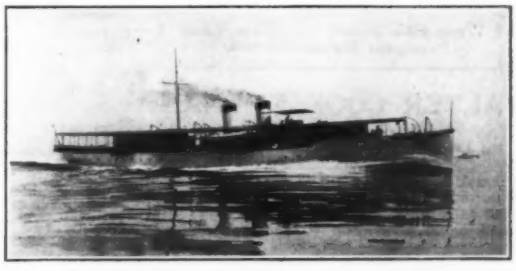


Will exchange Lawley built motor boat 49′ 9″ long overall, in first class condition and in commission, for auxiliary shoal draft ketch, sloop, schooner or yawl not less than 60′ waterline.

Boat offered in exchange must be worth $10,000.00 to warrant consideration.

Address Salt Brine, Box No. 143, "Motor Boating"

Priced for quick sale—the snappiest looking and most efficient performing express cruiser afloat. Hacker design and built. Sleeping accommodations for six. Equipped with twin Strasburg-Wilson Liberty motors. Speed better than 40 miles per hour. An ideal commuting boat for fresh or salt water. Available for demonstration at Detroit by appointment. Bell Isle-Hacker Boat Sales Co., 6304 E. Jefferson Avenue, Detroit, Mich.



IN COMMISSION—READY TO USE
FOR SALE

No. 9524—A combination cruising and express twin-screw oil-burning steam yacht. Thoroughly overhauled in every department this past winter, now ready for immediate delivery. Six large staterooms comprise the owners quarters aft with four bathrooms. Dining saloon is in forward deck house, with music room in after deck house. Detailed data and inspection through Henry J. Gielow, Inc., 25 West 43rd Street, New York, N. Y., Murray Hill 9134.

OR YOUR OWN BROKER

FOR SALE

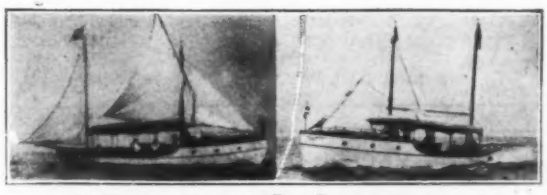
Pair of 8 Cylinder Speedways

Right and Left Hand for TWIN SCREW INSTALLATION

Both engines are mechanically perfect and have just been overhauled by the Consolidated Shipbuilding Corp., the manufacturers. Late models. Completely equipped. Suitable for express cruiser about 80 ft. in length. Price, $3,000 for the pair. Write today. Address:

JOHNSON MOTOR PRODUCTS, INC.

518-522 West 57th St. New York, N. Y.



RAISED DECK 50-50 CRUISER, 35′ x 10′ x 3′ x 6′

Lathrop engine. Speed 10 miles. Maine built. In the pink of condition. Completely outfitted. High grade tackle and accessories. Sleeps six. Staunch and able in rough weather. Easy for one man. None better in Long Island Sound. Complete motor cruiser without mast or sails. HARRIS, P. O. Box No. 1008, Bridgeport, Connecticut.

NAVAL ARCHITECTS & YACHT BROKERS

Thomas D. Bowes, M. E.
NAVAL ARCHITECT AND ENGINEER
Offices:
Lafayette Bldg., Chestnut and Fifth Sts.
PHILADELPHIA, PA.

COX & STEVENS
Naval Architects and Engineers
Yacht Brokers
25 Broadway, Cunard Building
(Morris St. Entrance), New York City
Telephone: 2780 Whitehall

William H. Hand, Jr.
NAVAL ARCHITECT
NEW BEDFORD, MASS.
HAND-V-BOTTOM DESIGNS
Every design, now as always, my personal work
Send stamp for catalog illustrating forty-three typical Hand-V-Bottom designs

THOMAS S. HANSON
Formerly General Manager, The Elco Works, Bayonne, N. J.
Yacht and Motor Boat Brokerage
19 West 44th Street New York
Telephone: Murray Hill 8676

WALTER COOK KEENAN
NAVAL ARCHITECT
902 Liverpool & London & Globe Bldg.
New Orleans, Louisiana
Sail and power yachts. Houseboats and commercial vessels. Surveys made in all Gulf Ports.
I have a large number of yachts of every description for sale, and some for charter.
Cable address: "Walkeen"

GORDON MUNROE
Naval Architect
Munroe Motor-Sailers
66 Grampian Way, Boston 25 Mass.

FREDERIC S. NOCK, INC.
Naval Architects and Yacht Builders
EAST GREENWICH, R. I.
STORAGE REPAIRS
MARINE RAILWAY

RIGGS YACHT AGENCY
350 Madison Avenue
(at 45th)
NEW YORK CITY
Telephone: Vanderbilt 8596 Cable Address: "RIGGING"

Yard and Shop

(*Continued from page* 48)

discs—a material that has proven by test and time the most perfect material for dry disc friction clutches, as it hangs on like a bulldog and is not affected by heat. The lever parts are steel, thereby eliminating all danger of breakage due to sudden shock or overload. All parts are standard and interchangeable. There is absolutely no dragging when in neutral. The forward or direct drive toggle action is powerful and dependable. Its weight is 21 pounds, and they are all packed in strong, convenient cartons, specially for dealers' distribution via parcels post or express.

F. S. Nock Dies After Long Illness

Frederic S. Nock, naval architect and constructor, of East Greenwich, R. I., died May 17 at his home in Division Street, Cowesett, after an illness of more than two and a half years.

Born in Birmingham, England, Mr. Nock came to this country when a boy, his parents settling in New York. He began designing yachts in 1895, most of them being for Western builders. He established the Narragansett Yacht Agency in Providence in 1896 to carry on the business of designing, construction, marine surveying and yacht brokerage.

Mr. Nock, in 1902, purchased the yard at East Greenwich, formerly owned by the John Saunders Marine Railway Company. The first boat designed and built by Mr. Nock at this yard was the cruiser S. B. Kitchel, for S. B. Kitchel, of Coldwater, Minn. Several months ago Mr. Nock completed the last of a series of five fast boats for the government now in service as rumchasers.

Mr. Nock was harbor master of Warwick. He was prominently idenified with the Rhode Island Yacht Club, Edgewood Yacht Club, Barrington Yacht Club, East Greenwich Yacht Club and the Narragansett Bay Racing Fleet. He was also a member of the East Greenwich Chamber of Commerce.

Baby Bootlegger Ignition Equipment

In a recent advertisement on Delco, featuring victories on land, sea, and air during 1924, an error was made in the statement that Baby Bootlegger, which won the Gold Cup race at Detroit, was equipped with Delco ignition. Baby Bootlegger was equipped with Robert Bosch ignition. From available information obtained at the time the advertisement was prepared, it apneared that Baby Bootlegger was equipped with Delco. Delco sincerely retracts its printed statement, as the mistake was due to an error; not to any attempt to be untruthful nor to take credit for the Robert Bosch ignition equipment.

Bear Cat Invades Galveston

A new and enthusiastic owner of the 1925 30-foot Belle Isle Super Bear Cat is J. A. Mitchell, capitalist, of Houston, Texas. This runabout will be used by Mr. Mitchell in the Houston Ship Channel and on Galveston Bay, where Mr. Mitchell's summer home is located at La Porte.

Despite the wide distribution which the Belle Isle craft have enjoyed, this is the first Bear Cat ever sent to this particular locality. But from the reception that was accorded Mr. Mitchell's boat, this will no doubt be the forerunner of many more to this part of the Gulf.

Advertising Index will be found on page 166

HACKER AND FERMANN, Inc.
We are prepared to design any type of craft Stock Plans to meet most requirements.
John L. Hacker Wm. E. Fermann
Edgewood 4119
Investigation Brokerage
Insurance
Naval Architects and Engineers
6304 East Jefferson Avenue
EDGEWOOD 4119
DETROIT MICHIGAN

JOHN H. WELLS, INC.
NAVAL ARCHITECTS
Service that's different
BROKERAGE SUPERVISION
Telephone: Murray Hill 3128-7
347 MADISON AVE., NEW YORK

HOTEL WOLVERINE
Detroit's Famous Popular-Priced Hotel
YOU will find, at HOTEL WOLVERINE, courtesy and quick, willing service—clean, pleasant, modern rooms—exceptionally fine meals—and low rates. Every room is an outside room with bath.
MARCUS L. FREUD, President
At Elizabeth Street East *and* Woodward Avenue
in the Heart of DETROIT
500 Rooms—500 Baths

Eisemann Adds to Engineering Staff

A. E. Berdon has become associated with the Eisemann Magneto Corporation in the capacity of Assistant Chief Engineer.

Berdon's engineering experience has been varied. From 1917 to 1919 he was with the Self-Feeding Vaporizer Corporation. Previous to that Berdon was research engineer for Dodge Brothers at Detroit, and from 1915 to 1917 was production engineer of the Remy Electric Company at Anderson, Indiana.

(*Continued on page* 66)

Immediate Delivery on

HALL-SCOTT Marine Engines

LM SERIES
(Liberty Type)
Bore 5", Stroke 7"
Four Cylinders, 125 H.P.
Weight 1165 lbs.
Six Cylinders, 200 H.P.
Weight 1500 lbs.

HSM SERIES
(Fageol Type)
Bore 4¼", Stroke 5½"
Four Cylinders, 50-70 H.P.
Weight 1290
Six Cylinders, 75-100 H.P.
Weight 1590 lbs.

THE steady demand for Hall-Scott Marine Engines has not been permitted to affect our policy of keeping a reserve stock of sufficient size to take care of last minute "immediate delivery" orders. A complete stock of all models, single and twin screw, is always on hand at our eastern warehouse from which shipment can be made on short notice.

Owners of Hall-Scott engines, beside knowing the satisfaction of having clean, fast and reliable engines, have at their disposal Hall-Scott service branches located at four principal boating centers: Detroit, New York, Palm Beach and Berkeley, California. The strategic location of these branches means that Hall-Scott owners can get service or parts within forty-eight hours, anywhere in the United States.

Write for descriptive literature on the series LM and HSM Hall-Scott marine engines.

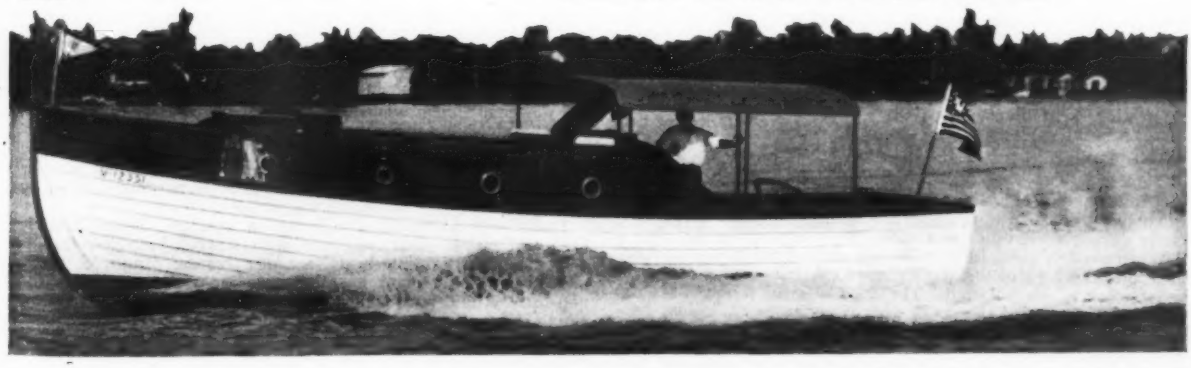
HALL-SCOTT MOTOR CAR CO.

EASTERN BRANCH: 461 EIGHTH AVE., AT 33D ST., NEW YORK, N. Y.

Factory: Berkeley, California

Florida: Power Marine Ways Co., West Palm Beach
Central West: Belle Isle Boat & Engine Co., Detroit

Joey, 35' x 9', a 1925 Florida fishing and cruising sea skiff powered with a pair of HSM six cylinder, 75-100 H.P. Hall-Scott marine engines. Speed 22 miles an hour. Joey was built by the Power Marine Ways Co., West Palm Beach, Florida, after designs by Clive Merchant, and is owned by Jos. Speidel, Jr., of Elm Grove, West Virginia, and Palm Beach.



STOP THAT WATER PUMP LEAK!

Kasson Lubricating Compound—used in marine service for 35 years—furnishes sure lubrication for all water pump bearings, stops leaks at such points and

WILL NOT EMULSIFY WITH WATER

Kasson Lubricating Compound is used by the largest vessels on the Great Lakes, by large and small cruisers and motor boats, as well as by Pierce-Arrow, Rolls-Royce, Locomobile and others.

Kasson lubricates *despite the presence of water.* It will not travel with the cylinder cooling water or *coat cylinder jackets with a layer of grease, reducing cooling efficiency,* as do other greases.

Sold in one pound cans only—one or two will service your boat for a year. Delivered postpaid anywhere in the United States for fifty cents per can—stamps, coin, money order or check—ten cents higher on Pacific Coast. Cash on delivery if preferred. Descriptive folder on request.

USED BY GAR WOOD

Manufactured *only* by the

ENTERPRISE OIL COMPANY, Inc.

(*Established* 1884)

BUFFALO, N. Y.

(Manufacturers of DUPLEX Motor Oils and Greases—used and sold by all Pierce-Arrow distributors throughout the world since 1901)

YARD *and* SHOP

(*Continued from page 64*)

New Evinrude Year Book

The Evinrude Year Book for 1925-26 is just off the press. It is a booklet in which everyone having anything to do with fishing, boating, hunting or other sports will be interested. Its scope is far beyond that of the usual catalog although it does include the motors of the well known Evinrude line. In addition to the latest addition, the New "1925 Champion Evinrude Sport Twin," the reader will find the Big Twin, winner of the Gold Cup outboard races in 1924, the Two Horsepower Single, the refined edition of the motor that founded the industry, and the two inboard models. One of these is a one cylinder four-five horsepower model. These two motors have proven very popular with sportsmen for installation in canoes and other light hulls.

The Year Book traces the history of boating from the ancient galley to the modern outboard-equipped boat. It also shows how Evinrudes have come to be used in every part of the globe —in Panama, Canada, Siam, China, Africa, South America, even to the uncivilized parts of the South Seas. It shows the uses of the Evinrude in exploration and how engineers make use of this handy motor in their work.

Indeed, this volume is literally a handbook for all lovers of the outdoors. By addressing the Evinrude Motor Company at Milwaukee, Wis., any sportsman can get a free copy of this interesting Year Book.

Elto Does Relief Work

Time and time again situations have arisen which have proved the value and usefulness of the little old outboard. Ever so often the utility of the rowboat motor has come into play, especially during flood times in various parts of the world.

When certain portions of Georgia were flooded not so very long ago, the Elto motor accomplished its share in the attendant relief work which followed. The flood worked serious havoc in the southern part of the state, destroying property, killing livestock, carrying away railways and houses and driving families from their homes.

Major George W. Price of Fort Scriven, Ga., was sent into the flooded area to investigate conditions caused by the flood, and in so doing he was furnished with and used a combination motor boat and hand-car for relief work. The Elto motor was selected as power for the boat.

The Comet Boat Lighting Plant

A small, compact, portable electric light and power plant that makes the conveniences of electricity available to boats without the trouble and expense of storage batteries, has recently been offered to boat owners, dealers and builders by the Comet Electric Company, Indianapolis, Ind., a concern that has manufactured electric generators for more than 25 years.

The new Comet plant generates 110-volt direct current and uses standard light bulbs, wiring and appliances. It provides sufficient current to light fourteen 25-watt 110-volt lamps; or furnishes almost ½ h.p. to run any one of several light electrical appliances, such as fans, vacuum cleaner, pumps, washers, etc.

The plant consists of a small air-cooled, four-cycle engine and a standard 110-volt marine type ball-bearing electric generator, which is belted to the engine. The generator is rated at 350 watts. Engine and generator are mounted on a cast iron base, which also serves as the fuel tank for the engine. The plant is very compact, occupying a space only 12 inches wide, 24 inches long, and 16 inches high. It weighs 120 pounds.

Current is obtainable by starting the small engine, and light and power are then available up to the full capacity of the plant. It is simple, inexpensive and easy to operate, having no instruments to watch or regulate, and will run 8 to 10 hours on one gallon of gasoline. The plant is suitable for lighting summer cottages, bungalows or small homes, as it is portable and easily installed.

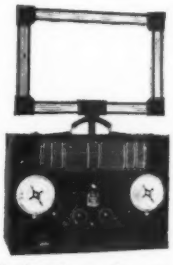
The Comet Company also makes a standard 32-volt electric light and power plant, equipped with storage batteries, that is also used for lighting boats, summer homes, camps, cottages, stores, etc. This plant has the same air-cooled engine as the non-battery unit, but includes a 32-40 volt marine type generator, rating up to 400 watts capacity, and a portable storage battery, which is furnished in three capacities, 2,000, 3,000 and 4,000 watt hours.

(*Continued on page 90*)

Advertising Index will be found on page 166

The PORTABLE Radiola *Super-Heterodyne*

Radiola 24, closed up, is a suitcase of genuine black cowhide, cobra grain, with 6 Radiotrons UV-199 . . . $195



Radiola 24, open for use, with the cover removed and the loop set in the top. Now it is ready for use—anywhere.

Radiola 26, closed up for carrying. In this form it uses small batteries that fit inside.

Radiola 26, finely finished in walnut, with an additional battery cabinet for home use. With 6 Radiotrons UV-199 . $225

Cutting through cool waters—whipping up a breeze on a blazing day—tune in on the music of far-away cities! Take along a Radiola Super-Heterodyne. It is made in two portable models, now—each *complete* with loudspeaker built-in, loop inside the cover, and space in the back for batteries. And it needs no installation—no connections. It is the same Radiola Super-Heterodyne that has won such fame for distance and for quality of tone—now made *portable*, to carry on board for every trip.

Radio Corporation of America

Chicago, Ill. New York San Francisco, Cal.

Radiola

REG U.S. PAT. OFF.

PRODUCED ONLY BY RCA

RCA

A Yachtsman's Paradise

Carl G. Fisher Develops Site on Manhasset Bay for Homes of Yachtsmen. The Scene of the 1925 Gold Cup Races an Ideal Location for Men Who Love Boats

By Walter F. Bailey

I DON'T suppose there is a real, dyed-in-the-wool boatman who has not at some time or other wished that he might live in the midst of a genuine boating atmosphere, a community designed and arranged primarily for boatmen, so that he might indulge his hobby throughout the season with a maximum of comfort and convenience, and a minimum of expense and bother. The annoyance most of us are willing to endure to enjoy a few precious hours of week-end cruising or sailing at least prove that the present generation hasn't yet gotten all the salt out of its blood, even though we have long since lost our standing as a seagoing nation.

The pleasure return on your boat investment is dependent on the number of hours you can use it, the number of moments actually spent afloat out of those leisure hours which are all too few for the business men of today. The time you spend getting to and from your anchorage, if it is not within a stone's throw of your home, robs each trip of some of its pleasure.

Have you ever been out at Manhasset Bay, Long Island, on a bright day in midsummer? This is the atmosphere that makes the ownership of a boat an unalloyed pleasure. Incidentally, Manhasset Bay will be the scene of the 1925 Gold Cup Races late in August, and if this regatta is as great a success as now seems certain you can be sure that this bay will become still more famous in boating annals and will be the scene of many future regattas of national importance.

Lucky is the man who can live near such a harbor as this. Here on any summer's day you see riding at anchor a fleet of the finest boats in the country, boats with famous names and boats of equally famous owners—boats of all sizes and types up to big houseboats and steam yachts hailing from all ports on the coast, with handsome runabouts and busy little dinghies threading their way about as the crews go back and forth on the business of their masters and guests. It is clearly evident that this is the favorite yacht anchorage of all in the vicinity of New York, no doubt because it combines every boating advantage with the advantage of being situated in a lovely suburban district practically on the edge of New York City.

The northern shore of Long Island is an ideal location for boat lovers, anyway. There is no end of interesting waters to explore within easy cruising distance. There are probably more fine estates hereabout than anywhere else in the country; a majority of New York's millionaires have selected this territory as the most desirable place to live near the great metropolis. Beautiful rolling country, studded with deep bays and inlets; old trees, stately mansions, fine motor roads and all the conveniences of the metropolitan area have made it a popular rendezvous of wealth and society.

When you can live in the heart of such a boating paradise as this, without sacrificing your business interests or your home life, and still enjoy quick transportation to the big city—what more could one ask? The towns surrounding Manhasset Bay—Port Washington, Plandome, Manhasset and Great Neck—are just twenty miles from New York City, with frequent service by fast electric express trains into the Pennsylvania Station. Thousands who live within the city limits of New York spend a greater time from home to office than the residents of the Manhasset Bay section.

With his characteristic foresight, Carl G. Fisher, who is already well known to most yachtsmen, has acquired a large tract of land on Manhasset Bay, which, by the way, is the last available water front property near New York. Furthermore, it is located in the midst of a fully developed residence section of the highest character, so there can be no question as to what the surroundings will be.

This tract has been developed as Bay View Colony, with a particular view to the requirements of yachtsmen. If there is anything within reason the boat owner could desire that is not already existent at this Colony, at least it is something entirely new and unheard of, because Mr. Fisher himself has probably had more experience as a yacht owner than any man you could name.

With three famous yacht clubs already in the vicinity—the Manhasset Bay Yacht Club, the Knickerbocker and the Port Washington Yacht Club—soon the new Bay View Colony Club on this property will also cater especially to the residents of the colony. The club house will have rooms for guests, a first-class restaurant and all the facilities that make the modern country club a center of interest and diversion in a suburban community will be available to the colony residents.

The property has been laid out by expert landscape architects, allotted in one-hundred-foot plots, every lot having a clear view of the water front and bay. Although the prices of the property are moderate, all necessary restrictions are being observed to keep it an exclusive and desirable year-around home site for those who are interested in boats and sports. There is a swimming pool and several fine tennis courts already completed at the colony, golf links nearby, and in fact every form of outdoor sport is to be had. The colony resident is not limited to boating or any other single pastime, for Mr. Fisher's idea is to create a home community of kindred souls who know how to enjoy life to the utmost in every sort of activity.

Bay View Colony is the name of this new yachtsman's paradise which has been developed by Carl G. Fisher on Manhasset Bay, Long Island, twenty miles from New York City Anyone familiar with some of Mr. Fisher's past achievements will not question the success of this colony in all that is planned for it. The well known donor of the Fisher Trophy, the man back of the Indianapolis Speedway, the man who created wonderful Miami Beach, Florida, out of a veritable jungle, the man who has owned more fine boats than any other living person—It is safe to say that Fisher knows what yachtsmen like and that he has the resources and the organization to make it a reality.

A complete boat yard and plant is maintained on the property, in the hands of one of the country's best known naval architects and yacht builders. There is a 300-foot dock to accommodate the largest yachts, and deep water anchorage for all. Manhasset Bay is an unusually well protected harbor, almost land-locked on all sides, approximately two miles wide at its widest part and three miles long, with clean water, very little tidal current, free from rocks, with sand or mud bottom affording good holding ground, and completely surrounded by beautiful country and fine estates. It is only two miles by water to the many big boat plants at City Island, six miles across the Sound to New Rochelle and twenty-two miles through the Sound and East River to the Battery, so that commuting by fast motor boats is entirely practical.

What a difference there is between the creation of Bay View Colony, and the old method of real estate development where a neighborhood grew up without any definite objective or even a comprehensive plan, depending on the individual whims of the property owner, without any real community spirit of co-operation. Carl Fisher's idea as shown by this colony, and by his Miami Beach development, is certainly a more successful way.

Large and complete as it is, Bay View Colony is a comparatively small undertaking for a man of Mr. Fisher's experience. If you have been down to Miami Beach, Florida, and witnessed the expansion in real estate values that has followed his original development of Miami Beach, you will realize that Bay View Colony cannot be less than has been planned for it. Mr. Fisher has the ability and organization to make it so. The work is already in progress and sales details are entirely in the hands of Mr. Ernest A. L'Elcluse, 8 West 40th Street, New York City, who is prepared to send further data on request.—Advertisement.

RADIO

CAN you think of any place where a real radio is of greater value than on a boat—isolated from shore—hours dragging slowly—and yet invisible concerts, jazz and ball games passing right across your bow all the time.

But it must be a **real** radio—to be worth while—it must not fall apart when the seas pound and the engine shakes every deck beam. Its delicate mechanism must not corrode and lose adjustment after a few weeks use—and you want to be able to select your entertainment at will—pull it right out of the air from near or far!

All of these things are now made possible for you by the very latest step in radio—

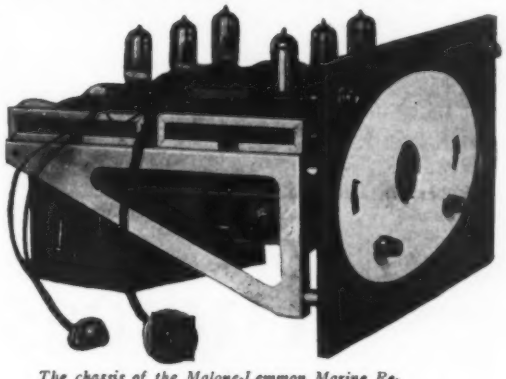
Mahogany waterproof cabinet can be mounted wherever convenient, with separate loud speaker outlets at various points about the boat.

The Malone-Lemmon Marine Receiver

The Malone-Lemmon Marine Receiver is the first and only radio instrument designed especially for broadcast reception on motor boats and yachts.

1. Withstands MOISTURE—CORROSION—VIBRATION and the frequent change of boat's position.
2. Operates on a very short antenna. No need to string complicated aerials.
3. Obtains distant stations with loud speaker volume.
4. Well constructed to withstand marine conditions, simple to operate, and produces a beautiful and natural tone.

To carry out our guarantee to the owner's entire satisfaction, we give our careful attention to installation details for various size craft.



The chassis of the Malone-Lemmon Marine Receiver. All apparatus is mounted on metal cantilever suspension. Six tubes carried on rubber shock absorbers give tremendous volume without vibration noises. All internal parts are individually waterproofed.

MALONE-LEMMON PRODUCTS INC.

ENGINEERS AND MANUFACTURERS

Radiocast Receivers and equipment

DEPT. MB

130 Waynewood Place

PLAINFIELD, NEW JERSEY

Telephone

PLAINFIELD—3551

The new Malone-Lemmon Marine Receiver is being distributed by the marine trade only. Boat Builders—Marine Supply Dealers—write immediately for our special proposition.

Malone-Lemmon Products, Inc.,
Dept. MB, 130 Waynewood Place,
Plainfield, N. J.

Gentlemen:

Please send me full information and prices on the Malone-Lemmon Marine Receiver. My boat is ..... ft. long.

Yacht Club .....

Name .....

Address .....

City .....

Robert A. Patrick

Robert B. Paterson

Harry W. Bennett

The Columbian Bronze Propeller Plant at Freeport, Long Island

Increased Speed Over Night

NOT always does even a good race horse run true to form, but for an untemperamental power boat there is little expectation of a sudden change in speed or manners. So when Mr. Halsey's Spendthrift II showed her heels to a formidable field and won the New York Athletic Club Trophy on July 12 of last year, it occasioned no little surprise.

Her victory in the race from New York to Block Island was made even more remarkable from the fact that some of her competitors had defeated her in previous races.

The fact is that Spendthrift II had increased her speed by two tenths of a mile overnight and this shortening of her miles by one fifth, if we may put it that way, was the direct result of the overnight installation of a Columbian Propeller.

Later in August, Spendthrift won the MoToR BoatinG trophy in a race between Mamaroneck, New York and Shelter Island, and proved that her initial victory was by no means a fluke.

Columbian Propellers are known and endorsed all over the world, and are on some of the fastest boats.

That there is the right propeller for every boat has been proven repeatedly. Ever since 1901, when Robert A. Patrick became convinced that it would pay to specialize in providing the motor boat with the propeller of proper size and pitch for his outfit, the truth of the idea has become universally acknowledged among experts.

Today the Columbian has the largest factory in the world devoted to the manufacture of propellers and Mr. Patrick is recognized as one of the leading experts in that line.

Columbian Propellers, and particularly Mr. Patrick's consummate skill in the production of special designs for special requirements, are well exemplified in recent reports from the Quartermaster General of Headquarters Corps Area at Governor's Island.

(*Continued on page 72*)

Spend Next Winter at MIAMI BEACH

The Famed Flamingo

The New Nautilus

SMART society moves the scene of its activities each winter to Miami Beach. Your friends in St. Paul, Chicago, Cleveland, New York, Boston Washington, and even from the gay capitals of Europe, come to this resort of tropical charm to linger and play, while you are struggling with coal bills and fighting the cold.

¶ You should know more about Miami Beach, its principal hotels and unrivaled facilities for rest and recreation. The land sports vie with the inviting water attractions along the broad beach. Four polo fields, four golf courses, twenty tennis courts, dancing, roller skating, as well as boating, bathing and game fishing.

The Homelike Lincoln

For data and descriptive literature address

THE CARL G. FISHER HOTELS

Flamingo *Nautilus* *Lincoln*

MIAMI BEACH, FLORIDA

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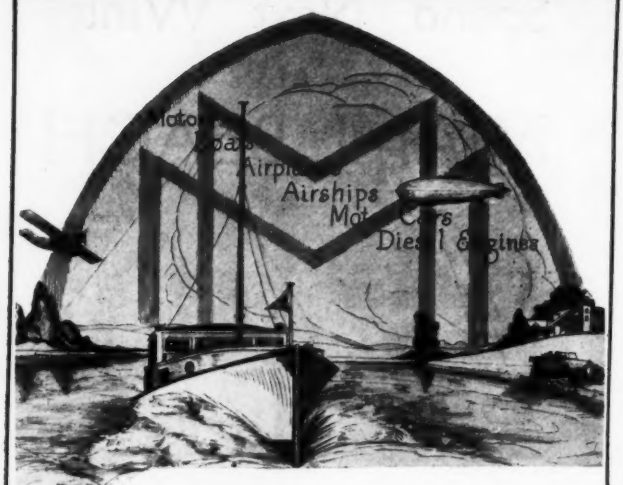


And All Propelled by Maybach-Zeppelin Motors

The historic trans-Atlantic flight of the ZR-3—the most gruelling of all tests—established Maybach-Zeppelin as the acme of perfection in gasoline motors.

Maybach-Zeppelin now stands at the pinnacle in motor designing and engineering for water, land, and air crafts.

The Motor that Brought the ZR-3 to America

COMPLETE BOATS, CRUISERS and ENGINE INSTALLATIONS

in finest workmanship and materials at extremely reasonable prices. Let us know your wishes and we shall furnish you with drawings and specifications. There is no obligation. Write to or call at our offices or telephone for a representing engineer.

MAYBACH MOTOR CO.

F. W. Von Meister

General Agent for the United States

253 West 57th Street New York City

Circle 3935

Increased Speed Overnight

(*Continued from page 70*)

That official reported that an installation of Special Columbian Propellers in the Colonel Barnett had increased her speed approximately one mile per hour and that the boat handled much more easily when making landings than when equipped with the old propellers. The modern Columbian Propeller is the result of many years' study in an effort to attain maximum efficiency.

It is a scientific product, not a mere casting, and in every detail, size, pitch, outline, shape of blades, faces and backs, thickness and the very important quality of material, is made to meet the functions and hazards to which it must be subjected. The Columbian Propeller is not cast from ingot bronze, remelted, but is mixed from virgin metals,—electrolytic copper, pure zinc and an alloy of the company's own development.

This Columbian Manganese Bronze is guaranteed to meet all physical requirements of the specifications adopted by the Marine Section of the Machinery Builders' Society which stipulate a minimum tensile strength of 65,000 pounds per square inch and a minimum elongation of 25 per cent in 2 inches.

Columbian Propellers are made with every safeguard as to accuracy. Weight limits and balance are so restricted that no blade for the same propeller varies in weight, and patterns are checked as to dimensions by pitch generating machines designed and patented by the company.

It would be impossible, in the confines of this brief article, to give the minute details of Columbian manufacture, but each and every one is of absorbing interest from the exact pattern making to the making of the molds, the polishing, balancing, boring and the final rigid inspection. As Mr. Patrick says, "after twenty-four years' intensive study of the propeller subject, we should know considerable about it," and the widespread use of the Columbian is a testimonial to the work of Mr. Patrick and his two able associates, Robert B. Paterson and Harry W. Bennett.

Mr. Paterson, who is a graduate of the Worcester Polytechnic Institute, is secretary of the company. Starting some fifteen years ago, he worked up from the position of machinist to the superintendency and later assumed the sales end and secretaryship of the organization.

It is needless to say that his long service like that of Mr. Bennett, has made him thoroughly versed in all the practical workings of the great plant.

Mr. Bennett, who has charge of the finances of the company, has been with the firm for 17 years, and all of that time has had charge of the finances, and that he is an expert in the organization and credit management of a large propeller manufacturing plant, is well proven by the outstanding success of the Columbian plant.

Surely, that propeller triumvirate composed of Patrick, Paterson and Bennett is a combination difficult to equal.

Outboard Motor Boat Race at Palm Beach

A five-mile race between outboard motored boats proved a high point of interest at the Palm Beach Regatta. Three races were run—one each for canoes, rowboats and for sea sleds, a timed race.

Meraco Speedster, owned by A. R. Knauer of Chicago, won the Johnson Motor Company Trophy for the canoe race. The boat, powered by a Johnson motor, did the course in 38 minutes, 30 seconds.

Baby Venture, owned by Keith Ferrell of Palm Beach, won the B. D. Cole Trophy for rowboats. His time was 49 minutes, 6 seconds, also with a Johnson motor.

Sherrick Hiscock made the best time in the sea sled event, a Johnson motor enabling him to do the course in 48 minutes, 38 seconds.

Miami Imports Roofing Tiles

The Cuban schooner Moro has arrived at Miami with a cargo of one hundred thousand Cuban roofing tiles, which are to be used in the construction of homes in Miami shores. The tiles are consigned to M. Ponce, a local contractor, and were originally on buildings near Santiago, Cuba. This is the first trip to Miami for this boat, and Captain Luis Games is enthusiastic over the port and city. As soon as the boat is unloaded she will be returned for another cargo. She carries an auxiliary gasoline engine, which permits her to operate irrespective of wind and weather.

Advertising Index will be found on page 166

SPEEDWAY STARS

Strong for

Scripps

Photo by GRAVELLE

FRONTENAC MOTORS CORPORATION
INDIANAPOLIS, INDIANA

April 7th, 1925.

Scripps Motor Company,
Detroit, Michigan

Gentlemen:

After winning the Biscayne Baby boat races at Miami Beach, Florida on March 20th and 21st, and this being my first experience in motor boat racing, I cannot let the opportunity pass without expressing to you my opinion of the Scripps F-6 motors which were installed in the Biscayne Baby boats.

I think the motors performed wonderfully well and none of the boys, as far as I know, had any trouble with their motors. The one which was in my boat, "The Hialeah" No. 6-, did not give me a moments trouble during the two days of racing. It had very good acceleration and did not faulter at any time.

Yours very truly,

Louis Chevrolet

LOUIS

WHAT do the famous automobile racers who drove the Biscayne Babies at the Miami Beach Regatta think of the Scripps F-6? How do these men, whose acquaintance with fine motor performance and efficiency is unequalled, like marine engines and motor boat racing?

Read their letters on these pages. And remember they are speaking of the standard Scripps F-6, right out of stock factory production, although they are accustomed to handling the world's finest racing engines, specially designed, handmade and trained for each competition like a thoroughbred racehorse.

WONDERFUL controllability and rapid acceleration of the Scripps F-6, without back-fire, fuss or loading, are singled out for special praise in these letters from the drivers of the Biscayne Babies. Both of these qualities can only be had in a power plant that is designed RIGHT in every detail.

To put it in other words, the Scripps F-6 as it stands today can hardly be improved upon. Any F-6 owner will tell you it offers the most in six-cylinder performance.

...rrigan-Cleveland Inc.
Distributors
2900 South Figueroa Street
Los Angeles, California.

April 4th, 1925.

Scripps Motor Works,
5817 Lincoln Ave.,
Detroit, Mich.

Attention--Mr. A. J. Downey.

Gentlemen:-

Much as I have wanted to write you, since returning from Miami Beach, Florida, my time has been very much taken up in getting ready for the Sprint Races to be held here on April 19th, however today I am taking a few minutes in which to thank you for the very kind treatment and to express the real delight I had in driving one of the Biscayne Baby Motor Boats equipt with one of your Scripps engines, at Miami Beach, Florida, Regatta, March 20th and 21st.,

While the experience was a new one, there was never a time when the engine performance was not apparently perfect. I was so fortunate as to win two of the heats and finish in all the heats in which I started and I must say that I cannot remember ever having felt more confident in a power plant than I did with yours.

It will always be a pleasure for me to recommend Scripps Motors.

Thanking you again, I am

Yours very truly,
W. D. Morton

WDM/BB

Indianapolis, Indiana.
April 2nd, 1925.

Scripps Motor Co.
Detroit, Mich.

Attention; Mr. A. J. Downey Vice President & General Mgr.

Dear Sir:-

I am writing you, in regards to my experience in the Biscayne Baby Race at Miami, Beach, Florida, March 20th and 21st. In which all the boats were equipt with Scripps F-6 motors,

As to the performance of my motor for the two days, racing was perfect. There was no vibration what ever. In all my experience with motors I never have driven anything that had the acceleration that this motor had. It certainly develops a great-deal of extra horsepower for a motor its size.

As to builders of motor boat power plants, you have made a tremendous contribution to the industry.

With best regards, I remain.

Very truly yours,
L. L. Corum.

RAY HARROUN
ENGINEER AND FACTORY REPRES...
6015 SECOND BOULEVA...
DETROIT

Scripps Motor Company,
5817 Lincoln Ave.,
Detroit, Michigan.

Dear Sirs:-

I was one of the fortunate ones selected to drive a Biscayne Baby at the Miami boat races and the performance of the Scripps Motors in all of the boats was such an outstanding feature that I feel like telling you how I feel about it.

So far as I know, there was not a single failure of the motors to percolate right through all of the six heats on all of the ten boats. It's true there were some odds and ends of trouble like knocking #1 spark plug off with the hatch cover and water getting into the ignition apparatus, but this should not count against the performance of the motors, which I again state was marvelous.

I understand that Mr. Fisher is having some stronger boats built and will put the same motors in them for next Winter's race. I hope I again will be lucky enough to drive one. It's great fun.

The boats were all right too - very fast for their class and if double planked as the new ones will be, would be all right.

Very truly yours,
Ray Harroun
Driver of #1 - Fullford-by-the-Sea.

RH:CW

Photo by
GRAVELLE

4205 Sunset Drive,
Los Angeles, California
April 6, 1925.

Mr. A. J. Downey,
5817 Lincoln Avenue,
Detroit, Michigan.

Dear Mr. Downey:

Just a few lines to give you my impression of the Scripps F-6 Motor, which I drove in the Biscayne Baby at Miami Beach, Florida, March 20 and 21.

I can only say the best for your motor. It had anything that one could expect of a first class motor. The acceleration was wonderful. It had power galore and, as we say in racing, it would stay put. - "CONFIDENCE" is the word when driving behind a Scripps motor.

I will further add that I experienced a thrill that I did not expect in motor boating and I assure you I shall take advantage of accepting any future invitations to compete in any boat event that will not interfere with my automobile racing program.

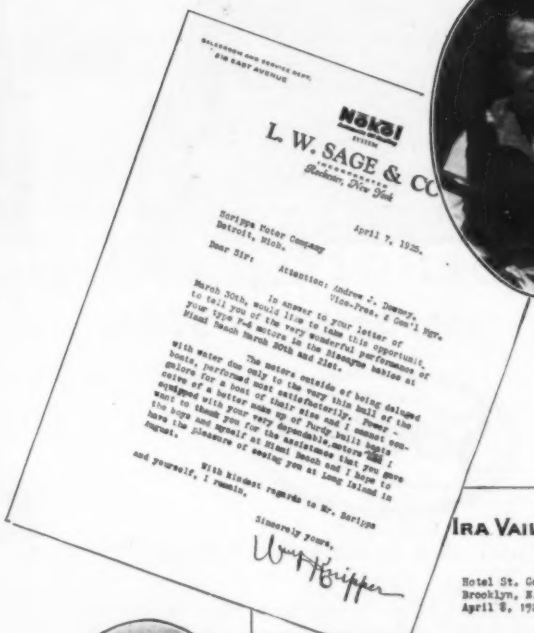
Kindly extend my personal regards to Commodore Scripps and Bill Taylor. Here's hoping I will see you in the near future.

Sincerely yours,
Peter De Paolo

Advertising Index will be found on page 166

WHILE the Scripps F-6 has won signal honors in racing, it must not be confused with engines suitable only for racing. Scripps engineers so fully utilized all the possibilities of six-cylinder construction in designing the F-6 that racing devotees were quick to recognize its adaptability to racing boats, as well as for cruisers and runabouts.

It embodies a rare combination of ruggedness and lightness. This sturdy construction together with perfect balance guarantees a power plant of unusually long life.



L. W. SAGE & CO.

Scripps Motor Company
Detroit, Mich.

April 7, 1925.

Dear Sir:

Attention: Andrew J. Downey, Vice-Pres. & Gen'l Mgr.

In answer to your letter of March 30th, would like to take this opportunity to tell you of the very wonderful performance of your type F-6 motors in the Biscayne babies at Miami Beach March 20th and 21st.

The motors outside of being delayed with water due only to the very thin hull of the boats, performed most satisfactorily. Power - calore for a boat of their size and I cannot conceive of a better make up of purely built boats. I want to thank you for the assistance that you gave the boys and myself at Miami Beach and I hope to have the pleasure of seeing you at Long Island in August.

With kindest regards to Mr. Scripps and yourself, I remain,

Sincerely yours,

IRA VAIL

Hotel St. George,
Brooklyn, N. Y.,
April 8, 1925.

Mr. A. J. Downey, Vice President,
Scripps Motor Company,
5817 Lincoln Avenue,
Detroit, Michigan.

Dear Mr. Downey:

The marvelous performance of the SCRIPPS F - 6 motor installed in the boat that I drove in the Biscayne Babies races at Miami Beach, Florida, March 20th and 21st, has prompted me to write to you.

I was greatly surprised when driving for the first time in a racing motor boat, to find that in place of an unsteady, vibrating motor which I had expected, I had a power plant that ran with as much smoothness and lack of vibration as any of our finest motor cars. During the six twelve-mile heats I did not have the slightest bit of motor trouble, drove with the throttle wide open at all times and the motor was in perfect condition when I finished in third place.

It is a pleasure for me to recommend the SCRIPPS F - 6 motor.

Yours very sincerely,

Ira Vail

Los Angeles, Calif.
April 21, 1925

...tor Company,
...Mich.

Attention: Mr. A. J. Downey

...men:

During the Midwinter Regatta at Miami, Florida, I was one of the ten automobile racing drivers selected to pilot the Biscayne Baby Speed Boats powered with your Scripps F-6 motor.

This was my first attempt at boat racing, and I must say that it was very thrilling. I had the misfortune to strike driftwood on the course causing my boat to fill with water, however, I managed to finish the heat I was in, and get to the dock so it could be repaired. I was out one heat each day of the races for this reason, but I must say, this was quite a test and worked a hardship on the motor as the boat was about one-quarter full of water.

At no time throughout the two days of racing did I have engine trouble. I was surprised at the acceleration of this motor, as I did not think it possible to reach the speed that these little boats did. It responded so quickly to the throttle and seemed to reach its maximum speed in a very short distance, which is one of the essentials of a racing motor. The motor is very compact and certainly has an abundance of power.

I am looking forward to my next opportunity to drive a speedboat equipped with your F-6 Motor at Manhasset Bay in August, and hope I can avoid hitting drift wood as we hope in automobile racing to avoid tire trouble.

Sincerely yours,

Phil E. Shafer.

Tommy Milton
BEVERLY HILLS, CALIF.

Mr. A. J. Downey,
Scripps Motor Co.,
Detroit, Mich.

Dear Mr. Downey:

I have for acknowledgesent your good letter of March 30th. Your reference to the Biscayne Babies brings pleasant memories. They were splendid little boats and I got real enjoysent in driving one of them.

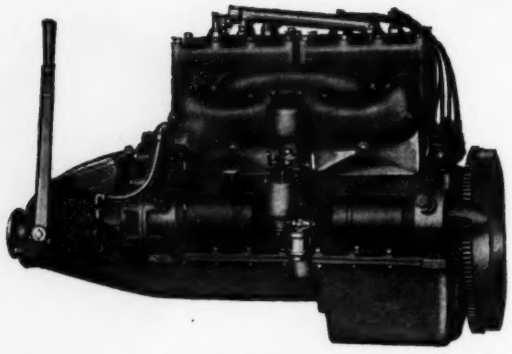
My impression of the F-6 motors which powered these boats is very favorable. In the six races in which I competed and in all my practice I drove my boat with the throttle wide open never feeling that it was necessary to spare the motor. The motor in my boat took this punishment without faltering. I feel that you have an unusually rugged, powerful and reliable motor.

I am already looking forward to the next opportunity of driving these splendid little boats.

Yours truly,

Tommy Milton

Photo by GRAVELLE



F-4 15-40 H.P. Medium Duty 40-60 H.P. High Speed **$750**

Scripps

"The Motor that crossed the Atlantic"

STANDARDIZATION is no new idea with the SCRIPPS organization, but a program conceived with the building of the very first engine and followed for twenty years.

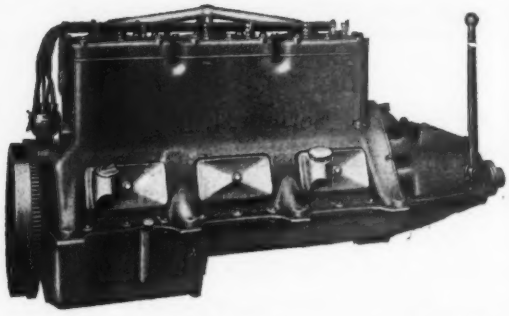
In fact, this institution was founded for the express purpose of developing and building a marine motor that should always be held up as a standard, conforming first and always to the idea of excellence. There never have been two grades in the SCRIPPS factory —a good and a cheaper—but the highest attainable has always been the aim.

For twenty years back it could always truthfully be said of every SCRIPPS built, that "better materials cannot be had—the craftsmanship is the most exacting —the design the latest approved practice to insure maximum service under all operating conditions."

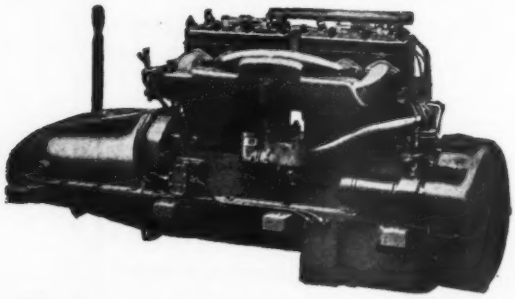
SCRIPPS has likewise been a trail blazer in developing not only a finished product but a complete one, being first to adopt the electric starter as regular equipment instead of tacking it on as an afterthought at a long price.

SCRIPPS first discontinued the fictitious high list price subject to varying discounts and established and published a fair net selling price for a completely equipped unit. The buyer pays the right price, neither more nor less than his neighbor.

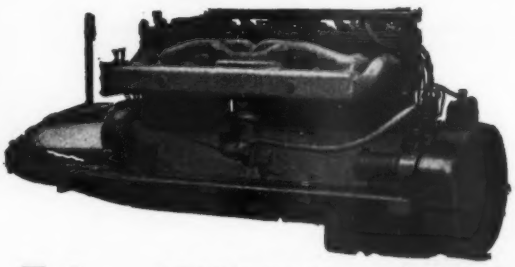
The world's greatest output of really fine marine motors supplemented by the most modern and complete factory equipment have resulted in manufacturing economies that have brought to the buyer an engine at the lowest cost when power, service, equipment, operation, maintenance and satisfaction are considered.



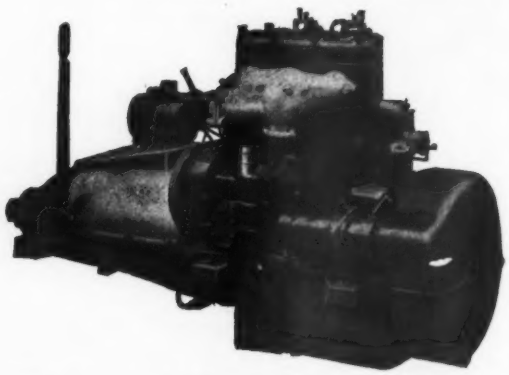
F-6 50 H.P. Medium Duty 100 H.P. High Speed Including Electric Starter **$1250**



E-4 30-45 H.P. Medium Duty 45-70 H.P. High Speed Including Electric Starter **$1250**



E-6 40-60 H.P. Medium Duty 65-100 H.P. High Speed Including Electric Starter **$1750**



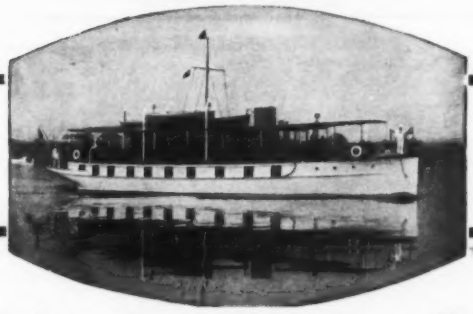
D-2 10-12 H.P. Medium Duty 15-18 H.P. High Speed Including Electric Starter **$650**

SCRIPPS MOTOR COMPANY

5819 Lincoln Avenue **Detroit, Michigan**

Advertising Index will be found on page 166

(Above) 106-ft. Houseboat "Leonie," for Mr. Murray Guggenheim, New York.



(Top Center) 85-ft. Houseboat "Sequois," for Mr. Richard M. Cadwallader, Jr., Philadelphia.

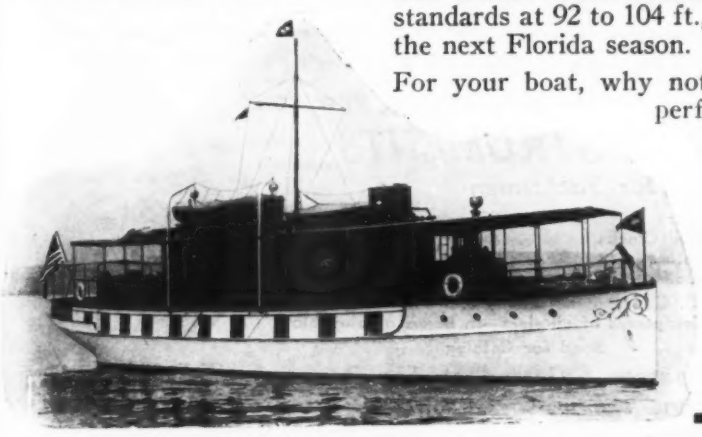
(Below) 85 ft. Houseboat "Zenithia," for Mr. A. J. Fay, Lowell, Mass.

(Above) 106-ft. Houseboat "Chieftain," for Mr. A. B. Dick, Chicago.

Mathis-Built Houseboats

now under construction—for men who know—will set new standards at 92 to 104 ft., which will make them the feature of the next Florida season.

For your boat, why not secure the latest, up-to-the-minute perfections, by placing your needs before



America's Pioneer Houseboat Specialists—

Mathis Yacht Building Co.

Specialists in Houseboats and Cruisers from 40 to 120 feet.

Cooper's Pt. **Camden, N. J.**

The INTERNATIONAL THIRTY TWO

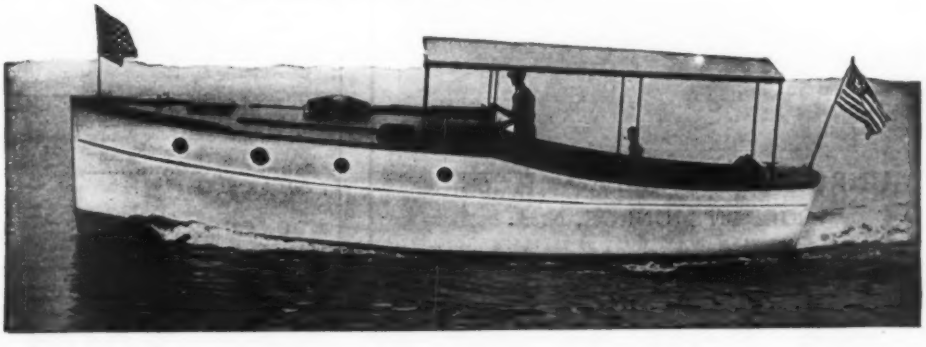
The First "Everybody's Motor Boat"

Raised Deck Cruiser Complete, Ready for Cruise —

—

Delivery from Stock

—

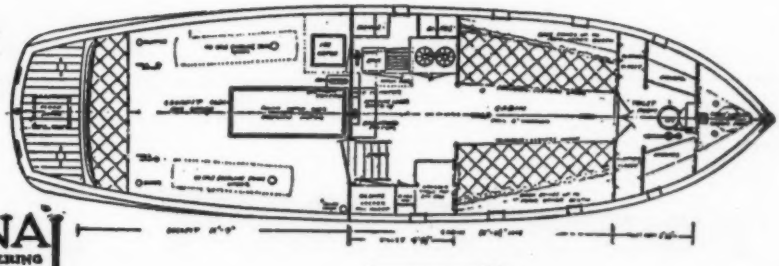


PRICES

$3950 with Kermath 20 H. P. Engine, speed 10 miles per hour.

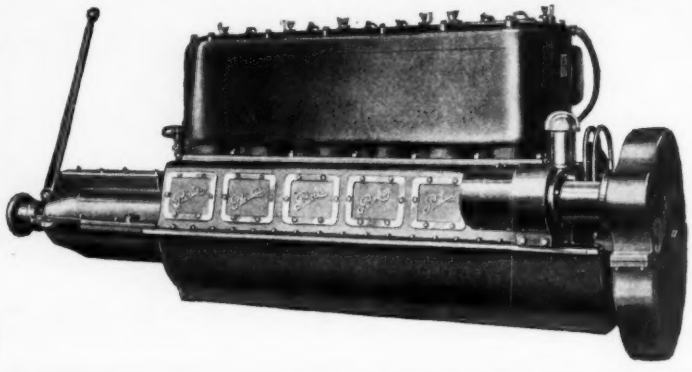
$4350 with Kermath 35-50 H. P. Engine, speed 12 miles per hour.

The Best Boat Value— By a Very Wide Margin



Arrangement Plan

INTERNATIONAL
SHIPBUILDING AND MARINE ENGINEERING CORPORATION
NYACK, NEW YORK, U.S.A.



PEERLESS

4 CYL. MEDIUM DUTY
35 H.P. at 600 R.P.M. 70 H.P. at 1200 R.P.M.
Price $1400 Weight 1000 lbs.

4 CYL. SEMI HIGH SPEED
90 H.P. at 1450 R.P.M.
Price $1550 Weight 850 lbs.

6 CYL. MEDIUM DUTY
50 H.P. at 600 R.P.M. 100 H.P. at 1200 R.P.M.
Price $2000 Weight 1400 lbs.

6 CYL. SEMI HIGH SPEED
140 H.P. at 1450 R.P.M.
Price $2200 Weight 1050 lbs.

Peerless Marine Motor Corp.
2150 Niagara St. Buffalo, N. Y.

KELVIN & WILFRID O. WHITE CO.

112 STATE ST., BOSTON, MASS. 38 WATER ST., NEW YORK

FINE NAUTICAL INSTRUMENTS

Specially Adapted for Yachtsmen

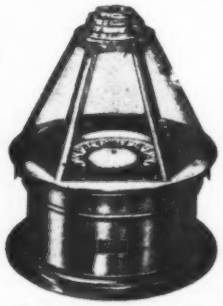
The Renowned WALKER "EXCELSIOR" Yacht Log

In knots or statute miles. An instrument of precision.

Binoculars
Ship Bell Clocks
Barometers
Sextants
Chronometers
Stop Watches
Complete Flag Outfits

U. S. Government Charts and Publications
Spirit Compasses of all sizes—in boxes or binnacles
Send for Catalog

Compasses Adjusted at Any Port and the work guaranteed

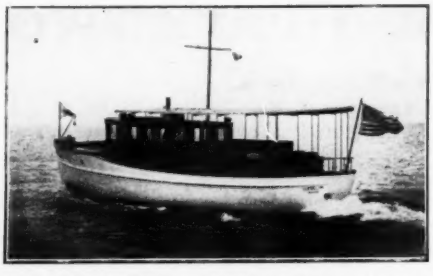


Shelf Binnacles of mahogany or brass. Pedestal and Stand Binnacles of all types and sizes.

Power Cruisers

Auxiliaries

Standardized Motor-Sailers, 40, 48, and 60 feet.



MUNROE DESIGNS

INSURE PERFECT SATISFACTION AND ECONOMY

GORDON MUNROE, N. A.
86 GRAMPIAN WAY, BOSTON 25, MASS.

The Kaufman

SILVERBEAM

A powerful electric searchlight, made especially for marine use. All brass, accurately machined and heavily nickel-plated. Thoroughly rust-proof.

Operates on 6 volt storage battery, using 30 candle-power nitrogen bulb. Projects the most powerful beam known for a light of its size. Indispensable for spotting buoys, landings, piers and anchorages as well as avoiding driftwood and rocks.

Swings in any direction or complete circle. Instantly detached for use as a work light. Also furnished with cabin control.

Prices.....$6.00 to $15.00

Sold by the best dealers everywhere. Write for Catalog No. 17

CHAS. KAUFMAN & SONS, Inc.
Santa Ana, California

Do You Want to Sell Your Boat?

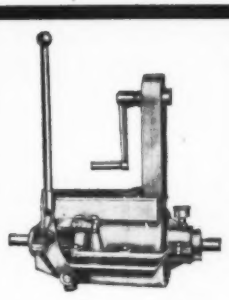
MoToR BoatinG's Market Place will put you in touch with a buyer. (See advertising rates on page 60.)

$835 COMPLETE

The SPORTABOUT
LENGTH 18' WIDTH 4'8" SPEED 16-18 M.P.H.
FORD MOTOR-MARINE EQUIPPED
SELF-STARTER & LIGHTS
DESCRIPTIVE MATTER on REQUEST
PAUL S. GESSWEIN BOAT CO.
BERGEN BEACH BROOKLYN, N.Y.

Advertising Index will be found on page 166

SYRACUSE
Reverse Gears



The Improved Gear
With a Rear Starter
Easy to Install

Put One In Your Boat

We make a special gear for converted airplane motors. We also make a special gear for International, Gray and Roberts Marine Motors.

We design and build special gears for manufacturers.

—then notice the difference in the control of your motor and boat.

Here's an enclosed gear running in an oil bath, with rear starter integral, ball thrust control, lever and starting crank. Smooth running, powerful, compact. Adapted for installation in all types and sizes of marine and converted motors.

Ask your boat builder or marine accessory dealer for the SYRACUSE Reverse Gear, or send direct.

SYRACUSE GEAR COMPANY, Inc.

101 Grape Street **Syracuse, N. Y.**

Carryme, a Utility Dink

(*Continued from page 39*)

The construction of the dink should begin with the laying down of the lines at full size on the floor. I rather fancy drawing these on red building paper such as is commonly used between the sheathing and siding on a frame house. One width of this paper is ample for the profile and deck plans are laid down one atop the other, using different color pencils for the two. I presume the laying down will consume several hours' time but, be not mistaken, this time is well spent.

There will be four forms spaced as shown and, of course, the stern board. The forms can be made of most any material; spruce will be about the cheapest to buy, but so long as the lumber is in the neighborhood of ¾-inch thickness anything may be used. The stern should be made of ¾-inch spruce or cedar. I should not make this of oak or mahogany as these woods are so heavy. If, however, an outboard motor is to be used, I should make the stern of thicker material; 1½-inch thickness would be about right then. And also with the heavier stern board I should fit heavier knees in each corner. These little outboard machines have a lot of power, and it must be remembered that a considerable thrust has to be taken care of.

The stern should be curved as shown in the drawing on the lines and made of spruce sided 2 inches and moulded as shown, the head being about 2¼ inches and the heel 3¼ inches. Boats of this kind are always built bottom-side up, having the forms, stem and stern board set up on the floor. It makes the work simpler if the forms are set so that the water line lays parallel to the floor, in which case it will be necessary to nail extensions to the side members of the forms and to the stern board so as to raise these to the correct heights. The forms and stern must be well secured to the floor, for otherwise these will shift when the planks are being bent on and the boat will be lopsided.

The chine pieces will be made of ⅞ by 1½-inch white cedar and should be let into the corners of the forms, into the heel of the stem and half-way into the stern board, using galvanized iron screws for fastenings. The screws should be 1¾ inches long and number 8 size.

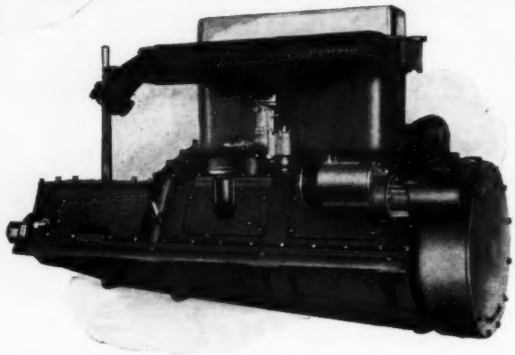
The side planking will be ½-inch white cedar and laid in two strakes. The one next the bottom will be applied first. But before it is fastened permanently the forward and aft ends must be rabbeted for a length of approximately 2 feet, the rabbet being for half the thickness of the plank at the end and gradually tapering away. The rabbet will be on the outside of the plank, and should be 1 inch in width. Along the chine piece the planks will be fastened with number 8 galvanized iron screws about 1⅛ inches long and spaced at 5-inch centers; at the stern the screws should be set on 2-inch centers and the same at the stem. Do not set the screws in a line, rather stagger them so as to keep out of the same grain in the wood. The top plank will be the same thickness as the first one applied, and fastened in the same way. In bending the planks it will be necessary to fasten them to the forms and for this purpose use light finishing nails, which will, of course, be drawn later. The lap between the planks will be fastened with copper boat nails with burrs inside and all riveted up snug. These should be spaced about 6 inches apart.

If the boat is to be finished with varnish the inside of the side planks should be hand-planed and sand-papered before they are fitted; it being practically impossible to clean off the planer marks after the planks have been fastened.

The bottom will be laid with ½ by 4-inch white cedar and fastened with galvanized screws into the chine pieces and the edge of the side planking as well. There should be a fair smooth surface for the bottom planks to land on here, and by all means lay the ends of the planks in Jeffery's liquid marine glue. This is the surest way in which to make the bottom watertight. The plank edges should be slightly beveled so as to hold several strands of cotton wicking and putty.

The keel will be made of ½ by 4-inch spruce and will be screw fastened to the bottom planks, using two screws to each plank and driving from the keel into the planking. It will be noticed that the skeg is fitted tightly against the bottom planking which means that the aft end of the keel will be slotted for the reception of the skeg. The skeg then must be fastened from the inside out, using 2-inch long screws for the purpose.

(*Continued on page 82*)



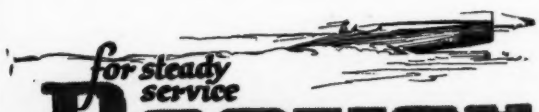
Get Performance and Price!

In the Beaver you get an absolutely trustworthy, seagoing marine engine — one that has been tried and proven. And in no slight measure is its low price an attractive factor. A point that every prospective boat owner will find profitable to consider.

The Beaver Marine Engine is a 4-cylinder type and is made in three models, JA 4½x6, JB 4¾x6, JE 4¾x6 high compression, dual ignition, all of which have the same over-all dimensions. It is compactly designed and built and is ideally adaptable to 35 foot cruisers. Besides, it will perform dependably and economically on work boats.

Write for our latest Marine Catalog which thoroughly describes all the advantages of the Beaver.

Beaver Manufacturing Co.
41 25th Street Milwaukee, Wis.
Marine Division



He Says All Right; Let's Do It

(*Continued from page* 20)

match to the dock and house. It is a glaring example of his version of playing the game. All cards on the table. He is a sportsman.

His determination is a high spot in his makeup. Years ago when he was a bicycle manufacturer and dealer in Indianapolis he conceived the idea of throwing a bicycle of his make off the top of the highest building in the city and offering to the person who returned it to his store a new one to replace it. It was announced in the newspapers. The police advised Fisher that if he carried out his plan he would be arrested. Fisher threw the bicycle off the top of the building as per schedule. While the arresting officers were en route to his store, Fisher was on his way to the police station, unescorted, to determine the penalty for keeping his promise to the public. The officers were informed by telephone that Fisher had arrested himself. He always is at least one jump ahead of his opponents' calculations.

I have known Mr. Fisher for many years and have heard hundreds of stories about him related by himself, by his friends and even by his enemies.

Yet I can remember only once when he was beaten at his own game. Again this was in Indianapolis. A neighborly feud was in progress with the dwellers next door because of some chickens. Both the Fishers and the family next door possessed a sizable city flock. Fisher's chickens were penned. The neighbor's were not. An ultimatum was issued that the neighbor's chickens would be shot the next time they trespassed on the Fisher garden.

When Fisher came home one evening he saw chickens slipping around the corner of his house and clucking their way to the tempting greens sprouting in his early spring garden. True to his promise, he went into his house, obtained a rifle, and began shooting the chickens. After he had killed half a dozen, Galloway, his negro servant, came frantically running to the scene, crying, "Don't shoot those chickens, Mr. Fisher, those are yours. Somebody left the gate open to your chicken yard." That ended the feud. For Carl Fisher has a sense of humor.

"I-remember-when" stories, always told about men who come from no place to a spot in the sun, by men who remained in the shade, about less prosperous days that were, usually rankle and annoy the successful one. To Carl Fisher they play an important role in his after-dinner reminiscences.

For someone to remind him that "they remember when" he used to fix bicycle punctures at a curb station for twenty-five cents is flattery to him, for of all the days of his life I am sure he looks upon those days when success was a dream with the utmost satisfaction.

Fisher's financial climb began in 1904 when he organized the Prest-O-Lite Co., which supplied the first gas tanks for automobile head and tail lights. It was a treacherous business venture with a capital of $10,000. When the company was sold by Fisher and his associates not so many years later, it brought millions.

As an automobile racing driver, Fisher was a real star of his time. In those days his pictures were displayed in newspapers as frequently as Babe Ruth's and Jack Dempsey's are today. He was a daring pilot whose spectacular driving was followed by those interested in automobiles in those times, and that meant everyone in the country, for the automobile was still a novelty.

He held, for a long time, the world's record for two miles, having made the distance on the Harlem dirt track in Chicago in the remarkable time of 2:02 in 1904.

The Indianapolis Motor Speedway, the greatest race track in the world, where each May 30 the International 500-mile race is held for a purse of $60,000 awarded by the management and added purses that bring the total to near $100,000, is a brain child of Fisher's.

Strangely enough, it was not originally built as an amusement enterprise, but rather as a proving ground for experiments in automotive engineering in a day when there were few spots in which an engineer designer or racing driver could test his cars.

Fisher accompanied the American racing team to the James Gordon Bennett cup race in Europe in 1905. The Americans were sadly defeated, not even making a comparative showing against the Germans, English, Italians and French, whose cars would go faster up hill than the American mounts could be forced down hill under their highest power.

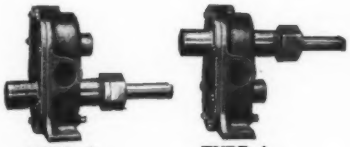
That defeat in a foreign land set Fisher's mind to work and in 1909 the two-and-one-half mile race track at Indianapolis, which has been a most important factor in automotive progress and development, became the laboratory of the industry and was opened to automobile racing.

The track has been a tremendous success in every manner

(*Continued on page* 84)

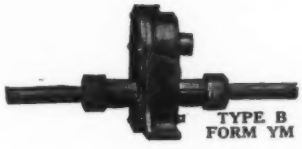
Advertising Index will be found on page 166

TYPE B
FORM XM



TYPE A
FORM YM

TYPE A
FORM XM



TYPE B
FORM YM

HAND BILGE PUMP

POSITIVE IN PERFORMANCE

THESE efficient Oberdorfer Pumps work smoothly under the most severe conditions. The housing, gears and shafting are all of high-grade non-corrosive bronze. Wear-proof. Leak-proof. Standard equipment on leading marine engines. Easily adapted for replacement on various type power plants. For water or oil circulation on all internal combustion engines. Electric motor and gas engine driven complete pumping units. Compact, dependable hand driven pumps—all built by Oberdorfer.

Write for Bulletin "D" and name of nearest dealer.

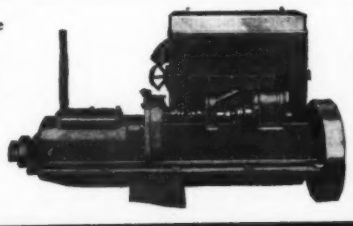
M. L. OBERDORFER BRASS CO.
SYRACUSE, N. Y.

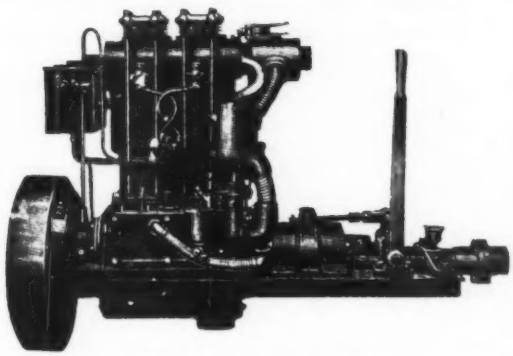
Oberdorfer Pumps

FRISBIE VALVE-IN-HEAD MOTORS *for Real Power*

The New Type "S" Model

Everybody's Power Plant

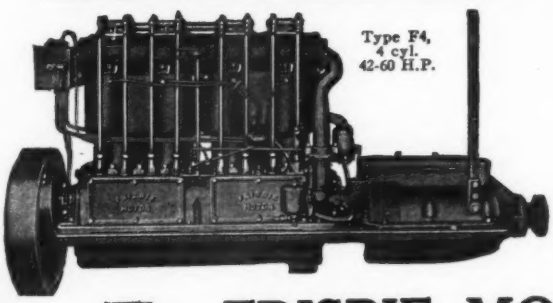




Type F2, 2 Cyl., 10-14 H.P.

The Frisbie Special
Price $475.00 Complete

Wonderful value at this price. Including Model A Schebler Carburetor, Atwater Kent Ignition, Paragon Reverse Gear, Force Feed Mechanical Oiler. A quality product at a quantity price.



Type F4,
4 cyl.
42-60 H.P.

The FRISBIE MOTOR COMPANY

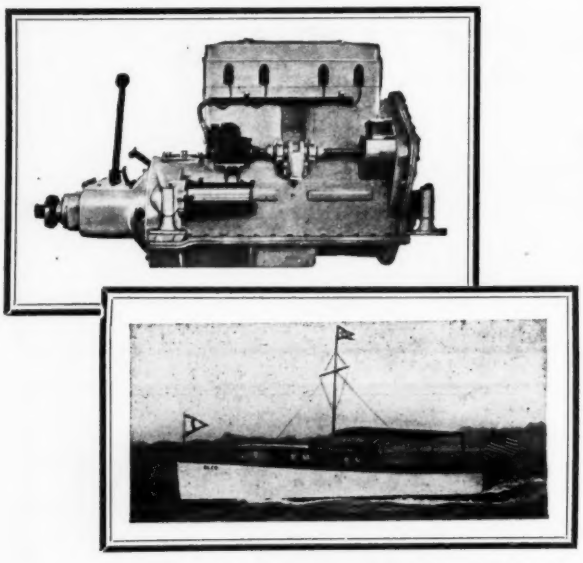
7 College St., Middletown, Conn.

Frisbie VALVE-IN-HEAD MOTOR

Manufacturers for over 20 years of overhead valve gasoline and kerosene engines for the propulsion of boats.

W-S-M
MARINE ENGINES

The World's Largest Builders of Standardized Boats Use W-S-M Marine Engines as Regular Equipment



The Elco 34 foot Cruisette, one of the standardized Cruisers built by The Elco Works, Bayonne, New Jersey. This company powers all of its boats, from 30 to 56 feet in length, with W-S-M marine engines.

THE Elco Works of Bayonne, N. J., have always endeavored to produce the finest boats to sell at a moderate price. More Elco boats are in service than any other make of standardized cruisers. The Elco Works power their 30, 34, 45 and 56 foot cruisers with W-S-M engines because Elco's own experience has taught them that a better engine of its size is not built.

It is the best engine for *your* boat too.

Medium Duty	High Speed
28-46 H.P.	48-60 H.P.
600 to 950 R.P.M.	1000 to 1400 R.P.M.
Weight 1450 lbs.	Weight 1350 lbs.

Renewable Cylinder Walls—Overhead Valves—Sliding Reverse Gear—High Pressure Lubrication—Swiveled Three Point Support

Write today for catalog "M G"

WILBUR H. YOUNG, Sole Distributor
522 Fifth Avenue New York
Telephone: Murray Hill 8160, 8161
Manufactured by The Wellman-Seaver-Morgan Company

Carryme, a Utility Dink

(Continued from page 79)

There is a light stern post up the stern made of ¾ by ⅞-inch spruce which will be fastened to the aft end of the skeg and to the stern board with 1½-inch screws. The purpose of this is to tie the skeg and keep it from warping, and as well this strengthens the stern board.

There should be a ⅞-inch natural crook knee at the bow and in the two quarters at the stern. These can be made of hackmatack, apple wood, pear wood, or if these are not available the knees may be made of ⅛ by 1-inch flat brass bent to fit. There should by all means be a knee of some description in the bow, but the knees at the stern are not necessary unless an outboard motor is to be used.

The side frames will be made of ⅞-inch spruce and it will be noticed that these taper from 1½ inches at the bottom to 1 inch at the top. I should not remove the forms until the side frames are all in place, and fastened. The fastenings should be screws or copper boat nails having burrs inside in way of the chine piece and the lap in the side planking. Then there should also be screws between.

The seats will be made of ⅝-inch spruce cut to the widths shown and fastened to the seat risings; the latter are to be made of ⅝ by 1½-inch white oak. I should not run the seats to fit the side of the skiff, rather leave a space for water to flow through for in cleaning out the boat it is very desirable to have the seat ends open so as to be easily washed out. Fasten the seats with 1¼-inch screws about three fastenings to each end.

The row locks will be fitted to small oak pads as shown and the centers of these should be between 8 or 9 inches abaft the aft edge of the seat. This brings the oars to a very comfortable position for rowing. I should use galvanized iron row locks of the kind which have the sockets which screw to the inside of the rail. Two pair of sockets will be necessary for when two are in the dink the oarsman should sit forward so as to preserve the balance.

The moulding under the sheer will be made of ½ by 1-inch spruce and will be set ½ inch below the sheer, thus forming an excellent pocket in which to get the rope or hose fender.

The outside finish of the boat is largely a matter of personal taste. I think that varnish makes about as serviceable a finish as anything and it undoubtedly looks well. However, if the boat is to be varnished the wood must be very well smoothed, for otherwise every scratch will show. Paint inside on the bottom, anyway, as this wears best. I should recommend 6-foot spruce oars for Carryme. Then there should be a long painter of ½-inch manila and a light anchor of the folding variety, and a wooden boat scoop. Thus she will be finished.

As a service to readers who might want larger copies of the drawings for Carryme to a scale of 1½ inches to the foot, arrangements have been made to supply blueprints at moderate cost. Write to the editor of MoToR BoatinG, 119 West 40th Street, New York, N. Y., how to secure prints.

Universal Engine Centrifugal Pump

The Universal Motor Company of Oshkosh, Wis., have announced a new engine-driven pumping unit, which is shown by the accompanying illustration.

This unit consists of the new Universal Flexifour four-cylinder 10 h.p. industrial engine, directly connected to a four-inch intake, three-inch discharge centrifugal pump, all mounted on a common cast iron sub-base, making the set compact and self-contained. The pump is equipped with ball thrust to take the inthrust of the runner, and is connected to the engine by means of an arm coupling.

The engine is a comparatively small four-cylinder, four-cycle engine of 2⅝-inch bore and 4-inch stroke, of sturdy construction, yet with great flexibility and smoothness of operation, making it ideal for driving the centrifugal pump.

Standard equipment for the engine consists of Bosch magneto ignition, Zenith carbureter, built in fly-ball type, self-oiling governor, muffler, five-gallon fuel tank, mounted, and flywheel.

The outfit is very compact and light in weight, and is particularly adaptable for portable work. The manufacturer also supplies a four-wheel hand truck for portable purposes, as shown in the illustration.

The capacity of the pumping unit in gallons per minute ranges from 350 gallons per minute, against a total head of 35 feet to 150 gallons per minute against a total head of 90 feet.

Complete information is contained in the catalog which has been prepared by the manufacturer, and a free copy may be had by anyone interested by writing direct to the manufacturers, the Universal Motor Company, Oshkosh, Wis., asking for a copy of Bulletin No. 200 F-K.

Advertising Index will be found on page 166

SKANEATELES

"Boats that will last"

Outboard Motor Boats

Combining several important and essential features for use with outboard motors—

Safety—Broad on the water to give buoyancy, especially at the stern to provide for the weight of the motor. Also higher sides than in row boats to give safety in rough water and to carry heavier loads.

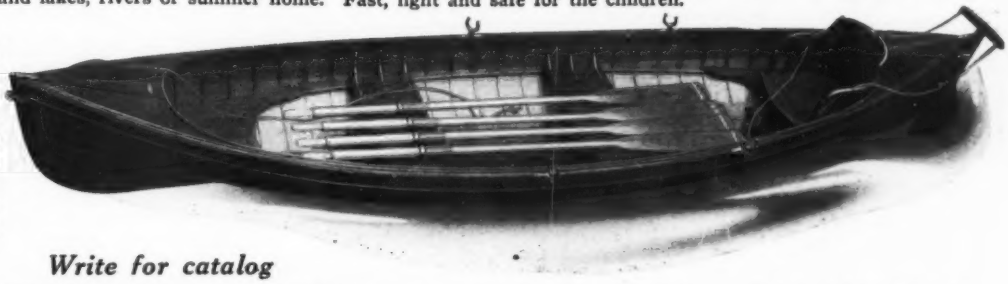
Strength—Tough, sturdy frame work, with reinforcing braces in right places to offset motor vibration. Planking riveted at ribs.

Lightness—Child can handle craft when motor is out. Boat is heavy only where heaviness helps.

St. Lawrence Skiffs—Rowboats—Canoes—Dinghies—Sailboats

The Skaneateles St. Lawrence skiff is the easiest rowing boat in the world, strongly built and beautifully finished. It is the ideal boat for inland lakes, rivers or summer home. Fast, light and safe for the children.

Keel and stems, selected white oak. Ribs, red elm. Planking selected white cedar, copper riveted and burred at ribs. Two rowing seats. Circle seats in bow and stern. Finished in best marine spar varnish. Inside below seats painted buff. Nickel plated or polished brass fittings. Length 16 feet. Equipment—Two pair spruce oars, leathered and copper tipped; cherry rudder; plain boat chair.



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SKANEATELES BOAT & CANOE CO., 38 Jordan St., Skaneateles, New York

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Operates on Gasoline, Kerosene, Furnace Oil, Gas Oil, Distillate, etc.

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A Home Complete Plus Speed and Reliability

HERE'S a beautiful, speedy and complete mobile summer home available for your vacation this year—and for the entire family, too, at the cost of a good closed car.

In this home afloat has been achieved the last word in design, utmost comfort in accommodations for a party of seven, together with safety and extreme seaworthiness. Length, 38 ft.; beam, 11 ft.; draft, 3 ft. Speed, 12 to 20 miles. Complete equipment includes auxiliary sails.

You can purchase this mobile home fully equipped and ready to run, from legitimate dealers in the principal large cities, just as you buy a high-class car. Terms if desired.

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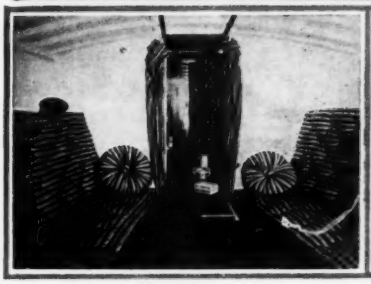
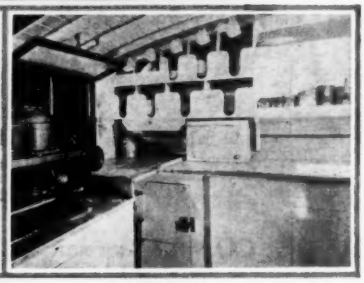


The Cabin



The Galley

He Says All Right; Let's Do It

(*Continued from page* 80)

and is now the biggest regular one-day-a-year business conducted any place in the world.

Fisher, a thorough sportsman with the finest instincts, has turned his attention from automobile racing in recent years and has thrown his racing energies on the waters.

Last March he caused to be built ten motor boats, constructed from the same specifications, powered with identical motors and alike in every detail. Then he invited ten automobile racing drivers to pilot them in a two-day regatta of 12-mile heats in Biscayne Bay off Miami Beach.

It produced the most spectacular, thrilling and exciting race ever seen on water and may revolutionize motor boat racing of the future. The success of the meet has given Fisher an added impetus and he is now planning details for future races that within two or three years will rival the international automobile drives.

Fisher's other yaching activities are no less spectacular than has been his history in the automobile field. His enthusiasm for all forms of yachting and motor boat racing is particularly keen. He has presented many valuable trophies for contests on water and has suggested rules for these contests, many of which were regarded as radical at their time, but have always led to real developments in the motor boating field and have tended to produce better boats and better engines.

Fisher has probably owned more motor craft than any man living. He is fond of speed, but not at a sacrifice of safety. His ideas on express and speed cruisers were ten years ahead of the times. Nearly twenty years ago, long before the marine high speed engine was ever thought of, he was building fast boats and endeavoring to find power plants, without much success, which would give him the speeds he desired. The success which he had with his earlier boats was disappointing to him, but never was he discouraged by their failure to perform. Although he has spent hundreds of thousands of dollars in this hobby and at times had little to show for his money, yet when any of the boats or engines failed, he never batted an eyebrow, but wired an order to some boat builder and engine manufacturer to start another outfit for him.

In all Fisher's desires for speed and the spectacular, the safety factor was always paramount. Never did he build a boat which was not thoroughly protected with bulkheads and water-tight compartments, which would assure the boat staying above the water should any accident ever occur. He was a firm believer in twin screw installations for safety's sake. For a period of at least ten years all of his boats have been powered with two engines.

An example of Mr. Fisher's desire for reliability and safety is recalled at this winter's Regatta at Miami Beach, where his ten boats of the Biscayne Baby Class competed, each driven by an inexperienced automobile driver, brought from the Pacific Coast especially to drive the boats in the races. These boats were very lightly constructed and the experience of the two days' racing showed that the bottom planking of the boats was not of sufficient thickness to give them the necessary strength to stand the severe pounding to which they were subjected in a race of this kind. Immediately after the close of the races, when some of the boats were found to be leaking badly, due to the insufficient strength of the bottom planking, he ordered his boat builder to remove the 100 h.p. power plants with which each boat was equipped, together with such oher mechanical equipment which could be salvaged. He then ordered a bonfire to be built and one by one the hulls were put on the fire and burned. He then turned to his boat builder and ordered twenty more boats for next summer and next winter's races, to be powered with the same power plants, but to be constructed heavy and strong enough to remedy the weaknesses which the former craft showed. The hulls which were burned cost perhaps $15,000 to build, and were far from useless, but Fisher's action was simply typical of his desire to produce nothing but the best.

Mr. Fisher cruises extensively in his boats. His expeditions among the unexplored portions of the Bahama Islands are but one of many examples of the use he makes of his ships. He is in every sense a deep sea sailor. He learns from experience what boats should be in all sorts of deather conditions and is constantly planning new boats with the changes he has found desirable carried out. He owns a good size boat building plant of his own, and it is very seldom that there are less than two

(*Continued on page* 86)

A Success for 28 Years

In selecting your new motor check up on a few important outstanding features.

—its popularity and record.

—its completeness of equipment.

—see if there are any extras required.

—learn if the power range is of a comparative rating.

—check up on the piston displacement.

BRENNAN
Standard MOTORS

Do you know about the new Brennan? It is the famous and popular model D-4 further refined, and now completely enclosed. The bell-housing enclosing the fly wheel is an integral part of the crank case. You owe it to yourself to learn about this remarkable motor.

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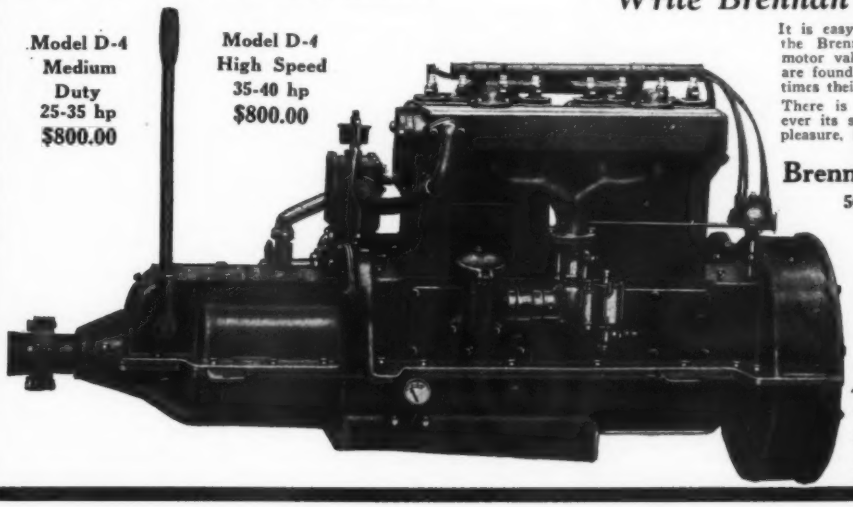
Model D-4 Medium Duty 25-35 hp $800.00

Model D-4 High Speed 35-40 hp $800.00



It is easy to check up on our claims that the Brennan represents the greatest 1925 motor value. There are features in it that are found only in motors selling at several times their cost.

There is a Brennan for your boat whatever its size or type and whether used for pleasure, fishing or commercial service.

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Write me your new Sale Plan. My requirements are .....

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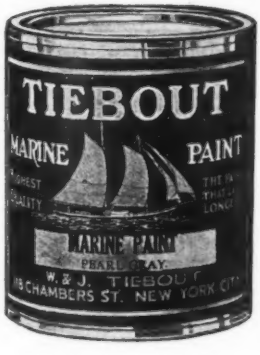

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NIAGARA SPECIAL
4 cylinder
4 cycle
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Dealers Get Our Proposition
The NIAGARA GEM
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$110
The popular "Gem," a four-cycle, 5-H.P., complete power plant that sells for less than any engine of equal power, is a motor you can depend upon. In trolling and slow speed it is unequalled. Has wide range of flexibility and is free from vibration.
See other Niagara Motor announcements on pages 144-158 of this issue.
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"Gang-Way"

The FEDERAL ELECTRIC SIREN gets **instant** attention. It is the recognized Marine call —in use everywhere.

TYPE "A"

$50.00 COMPLETE

Your Boat should have one. Made in 6, 12, 18, 24, 32, 110, 220, or 250 volts.

Operates either A. C. or D. C. Copper, Brass, or Nickel on Copper or Brass Finish. Price, only $50.00. Send coupon today. Be sure to give voltage desired.

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Send Type "A" FEDERAL SIREN, $50.00 complete, for .... volts, and if not pleased I will return it prepaid for credit.

Name .....
Address .....
City..... State.....(MB-6)

He Says All Right; Let's Do It

(*Continued from page* 84)

cruisers on the floor of the boat plant building for Mr. Fisher. He is generous with everything he owns and his friends get as much use and enjoyment out of his boats as he does.

Mr. Fisher recently changed his residence from Indianapolis to New York City, particularly in order to locate on navigable water which he loves so much. Even in this move, his love of adventure and to be always doing somehing to improve yachting conditions, is manifest. He had no sooner located at Port Washington, L. I., on Manhasset Bay, than he purchased some thirty acres of shore front property on the Bay. This land was undeveloped when Fisher obtained it, but within a few weeks all the latest machinery was at work improving the property and developing it into building lots, which he plans to sell to his friends in order to have them near him in the East. This newest development is to be a colony for yachtsmen. Into his plans for this property, he has woven every idea he can think of which would appeal to the boat owner. He has built an enormous dock out into Manhasset Bay, which will have sufficient wharfage space to accommodate all the yachts of people living in the new development. A number of tennis courts are already finished, as well as a large covered swimming pool. The property would not be complete without a boat building plant, so Mr. Fisher has moved bodily to Port Washington his plant which was formerly located at Trenton, Michigan. He says he likes to drop around each day and see the boat builders work and watch his craft grow from the keel up. He will tell you that the smell of shavings in his plant is more pleasing to him than profits on the ledger.

There is little in the line of daring that has not been attempted by the adventurous Hoosier. It was in 1908 that he attached his automobile to a free, gas inflated balloon, soared over Indianapolis, landed some miles away, packed the empty gas bag aboard his car and drove back to his home for the evening meal.

It was a feat that not only startled the thousands of home town folks who saw it, but amazed the entire world.

Stern in his business commands, there is a secret sympathy for his less fortunate fellowmen. It probably is telling a tale out of school to relate that he is a persistent benefactor of ex convicts. He has had scores of men released to his custody from various prisons throughout the country. It undoubtedly has strengthened his belief in humanity to know that of the number he has helped only two of the lot returned to their life of crime.

Probably the most lovable trait in Fisher's make-up is the bond of true friendship that always has continued with his friends of the days gone by. Hundreds of the world's most famous men have sought him out in recent years; he has made friends with practically all of them.

But his constant companions—the men with whom he spends his happier moments—are the men with whom he was associated many years ago. Earl Kiser, with whom Fisher raced on bicycles and in automobile racing cars, is a boon companion. James A. Allison, who, until Fisher's Miami Beach development project, was closely associated with him as a partner in every business project, is another constant companion.

No man of wealth gets more enjoyment from his wealth than Fisher. He enjoys life to the utmost. Born inland, he is a natural lover of the sea. He has the finest of cruisers, which he uses daily. He loves horses and, although he learned to ride later in life and to play polo still later, is one of the most vigorous of polo players. He wears glasses while he plays—probably the only player in the country to do so—and he rides hard and is an expert stroke. His opponents say he gives no quarter and that when he starts down the field he usually reaches his objective.

Fisher plays tennis daily. Rain or shine, he is to be found on his glass-covered courts.

He is one of the most difficult personalities in the land to interview. He despises success stories. Great brain ability and wisdom as a means to success bore him. In his own case, he frequently says, and in many others that have come under his direct observation, he finds that environment, accident and luck have a great deal to do with a man's life—his success, happiness and wealth.

Several times, he points out, in his earlier business experiences he encountered substantial losses which almost broke him financially, and that recovery into larger successes was due to chance and opportunity.

He is fond of his organization and the men he chooses to do his work. "I have a great many men working for me whom I consider have more brain power than I have, and I try to get this type of men to help me in my various lines of work. It pays well in a business to know all of your employes—from the truck driver up—and to stick to them in trouble."

He does, too. That's Carl G. Fisher.

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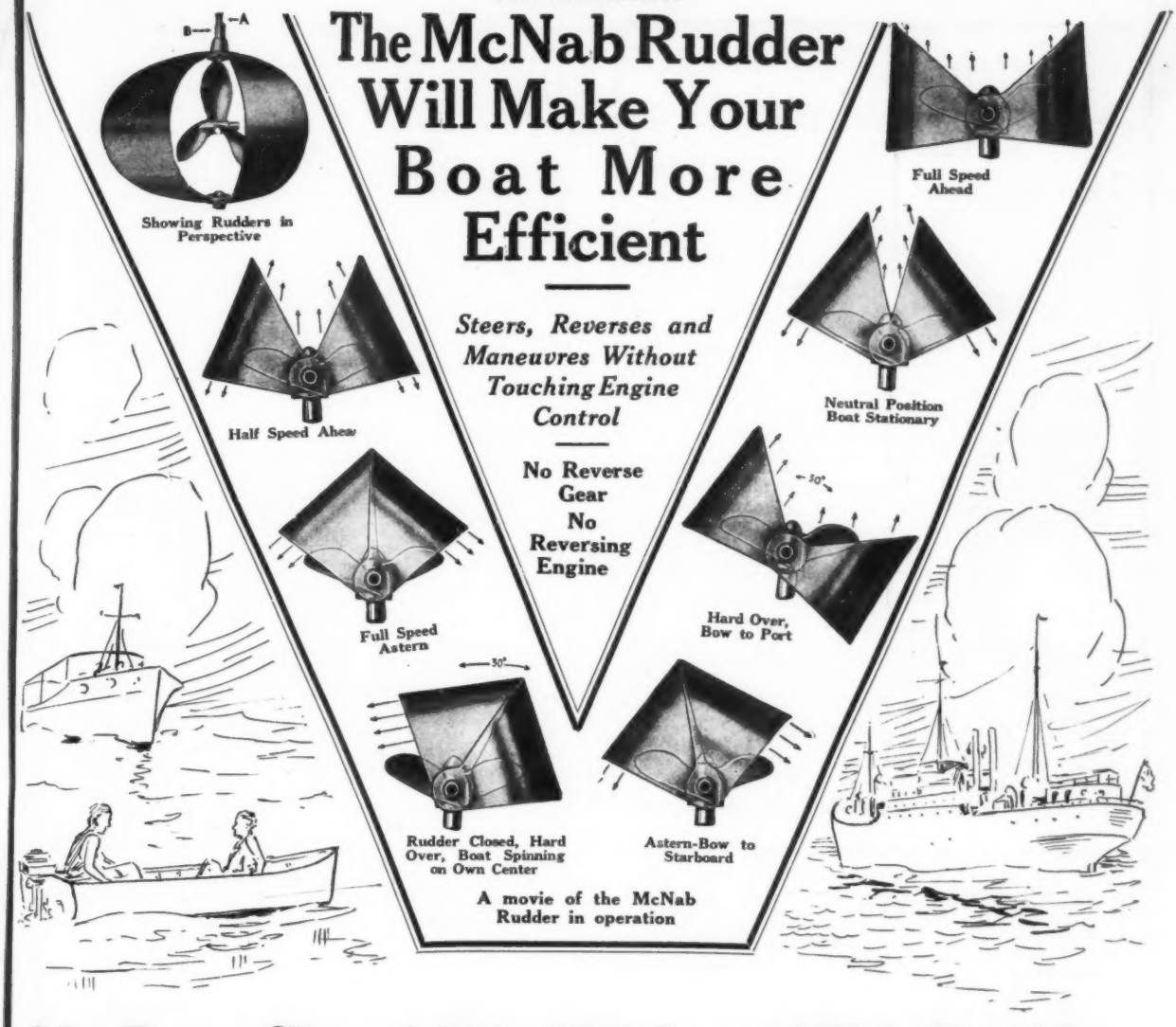

The McNab Rudder Will Make Your Boat More Efficient

Steers, Reverses and Maneuvres Without Touching Engine Control

No Reverse Gear
No Reversing Engine

A movie of the McNab Rudder in operation

No Boat Should Be Without This Rudder

IF you are really interested in improving the operating efficiency of your boat you will order a McNab Rudder immediately so you can enjoy it on your boat this season. The McNab rudder is in no way a novelty or freak, it is a practicable and durable device based on the elementary scientific principle of harnessing the power of deflected water to maneuver the boat. It does away with the need of reverse gears and reversing engines. Every possible maneuver is made through the McNab Rudder, without touching the engine controls.

You can brake, steer, reverse and turn boat on its axis —a maneuver impossible with any other type of rudder. And above all it gives you better and quicker control over your boat.

The United States, British and other governments are using this type of rudder on many of their boats. Boat builders and naval architects have highly praised the McNab Rudder and are adopting it in increasing numbers.

The McNab rudder is applicable to all types and sizes of propeller driven boats—from the small outboard motor craft to an ocean going liner.

Write today for illustrated literature. State size of propeller diameter and B.H.P. of your engine. Owners of outboard motors need only give make of motor when writing.

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75 John St., Bridgeport, Conn., U. S. A.

Ignition Satisfaction

Assures the power you expect

Like every other owner, you like to know that your engine is capable of developing its full rated horsepower.

However, to be sure of real power when you want it, never-failing ignition is essential,—the kind of white-hot spark ignition Eisemann High Tension Magnetos always give.

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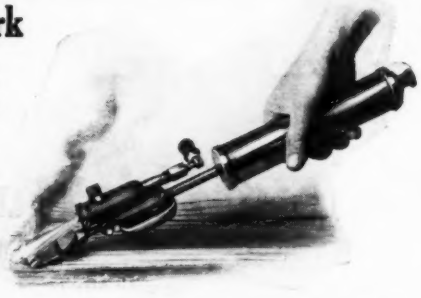
EISEMANN
ELECTRICAL EQUIPMENT

1/2 the Work

and a better job. Scrapers for hulls and anywhere paint is removed.

Try our self-heating brand attachment on your equipment, it proves ownership and pays for itself.



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MARINE HARDWARE
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Money Saving Prices

Life Preservers Pillows	$1.00
Comb Lamp Class 1	2.10
Stern Light	1.50
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Complete Catalog, with Money-Saving Prices, Free Upon Request.

ATLANTIC SUPPLY CO.
ATLANTIC HIGHLANDS, N. J.

Through the Trent Canal

(*Continued from page 35*)

huge boulders rising abruptly to the surface in a way that seemed to spell trouble if he knew not where the next one lay. It was here that Dan's long experience assumed valuable proportions, and under his skillful hand nothing interfered with us, as we reached flight locks, numbers 28 and 29 at Burleigh Falls, 9 miles above Young's Point, and were through the two locks at noon. We tied up here and accepted the hospitality of the lock-tender and the service of his cook stove to make a pot of tea and eat lunch. From Burleigh Falls, which we left at one o'clock, we found we were in for some bad weather, as the wind increased in violence and nearly reached hurricane proportions from the northwest, the low clouds enveloping the tall pines on the side of the lake. The waterway here is comparatively narrow for the next two miles, when we passed through Lovesick Lake and lock 30 on to lock 31, five miles farther, at the entrance to Buckhorn and Pigeon Lakes, into the town of Bobcaygeon, where we had the toughest experience of the entire trip. Rain commenced to fall in showers and the wind blew almost a hurricane and the shallow waters of Buckhorn Lake piled themselves into a very angry sea, some waves being five to six feet and of a very choppy nature, hardly as long as the boat, which made a wet sea for our 26-footer. However, after we had labored around the Red Buoy about the middle of Buckhorn Lake, we found we could head in to the storm pretty well, and were not at all sorry when we came to the narrows connecting Buckhorn Lake with Pigeon Lake, the latter being a long, narrow lake lying north and south, so that in navigating Pigeon Lake we could run almost into the teeth of the gale, which we did under full power, with the result that Red Bird was out of the water as much as she was in it, and great clouds of spray were thrown into the wind and carried aft as Red Bird rushed through the storm and sea at a speed of 22 miles an hour, although it seemed much faster.

All went well until nearing the north end of the lake, when we felt it necessary to slow down as we had to take the seas a little on our port bow. We had no sooner reduced the speed to prevent breaking the waves and drowning with spray than we hit a sunken log with our propeller. It was our own fault, as it was easy to see that we had gone a considerable distance out of our course in trying to get out of the wind. We had about three miles to go and, with a badly bent propeller, picked our way into Bobcaygeon, having covered 70 miles of our trip. Luckily we found everything we needed at Bobcaygeon to raise the stern of the boat and put on the spare wheel which we had brought with us, but by the time this had been done and we had loaded gasoline, the storm had risen to such proportions that we decided discretion was the better part of valor and arranged for a boat house in the river, in which we placed Red Bird until the following morning. The weather had turned very cold for this time of year, and we were glad to find our way into a well-kept, comfortable hotel in the main street of the little town alongside the locks, and here we spent our first evening, hoping that the storm would subside before Sunday, which was to follow.

After our experience in Buckhorn and Pigeon Lakes and the wetting we got coming into Bobcaygeon, we required very little rocking to induce sleep. With returning consciousness I was aware of the bright sunshine and almost total lack of wind on Sunday morning. We had breakfast early and passed through lock 32 at Bobcaygeon and started on our trip through the upper end of Sturgeon Lake. Half way down this lake we found a beautiful settlement on a point which we had to round to get to the Fenelon Falls locks, which are located in the Fenelon River. There are two of these locks, Nos. 33 and 34.

We were again on our way and passed out of the Fenelon River to Cameron Lake, a little round lake about two miles long and 1½ miles wide, and arrived at the Rosedale locks, in a short canal which connects Cameron with Balsam Lake. When we had passed through this lock, which has a lift of only four feet, we were at the height of land, or height of water as the case may be, as from this point on towards Georgian Bay we began to go down, whereas up to this point we had been continually going up.

On arriving at Rosedale we found that we were destined to spend the day there, as the next lock, 36, which is located at Kirkfield, was about five miles down the canal from Balsam Lake and was another hydraulic lift lock and at this time of year, after September first, the lift locks do not operate on Sunday. We ate lunch at Rosedale that day out of the lunch kit we had with us and during the afternoon cruised to Cobokonk, a sawmill town and the terminus of one of the branches of the Canadian National Railways. We admired the summer homes around this lake, and in the afternoon discovered the summer home of one of my friends, where we spent an hour

(*Continued on page 92*)

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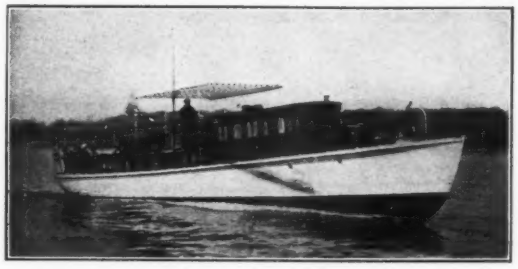

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The Seagoing Cruiser "CLOVER"

Ready for Immediate Delivery

Length	**80′ 6″**
Beam	**10′ 6″**
Draft	**3′ 6″**

Two double staterooms, two toilets, deck saloon. Galley, pantry, crew's quarters and storeroom. Double planked hull. Mahogany joinerwork. Bronze fittings. 200 H.P. speedway motor. Speed 20 miles per hour. Will demonstrate to authentic buyers. For further particulars and price write:

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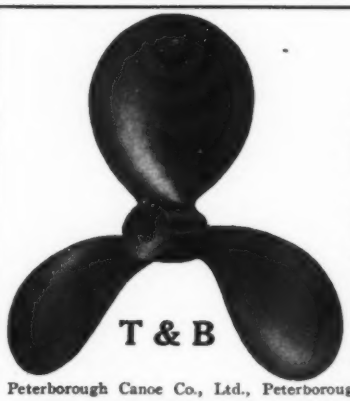

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If at all in doubt as to the type and size of propeller best adapted to your boat—let us have its specifications—we promise you that you will be satisfied with the wheel that we recommend.

Our stock is complete—we can give you immediate delivery.

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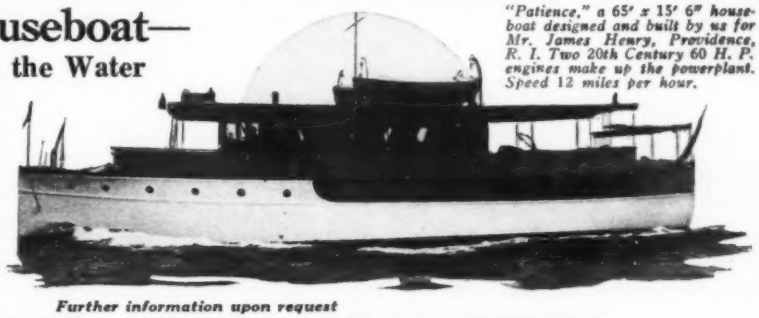
The Modern Houseboat—

A Delightful Home on the Water

THE houseboat is ideal for cruising in northern and southern waters. The New York Yacht, Launch & Engine Craft represents the very latest in design, serviceability and comfort. Designing and building is done entirely in our yards. Our prices cannot be equalled when construction and finish are considered.



"Patience," a 65′ x 15′ 6″ houseboat designed and built by us for Mr. James Henry, Providence, R. I. Two 20th Century 60 H. P. engines make up the powerplant. Speed 12 miles per hour.

Further information upon request

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MORRIS HEIGHTS **NEW YORK CITY**

DOES YOUR BOAT LEAK?

Send for Booklets—*"How to Make Your Boat Leakproof," and "Marine Glues—What to Use, How to Use It."*

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Finish the Season With a Dry Boat—Let Us Tell You How.

For Sale by all Yacht, Boat and Canoe Supply Houses, Hardware, Paint and Oil and Sporting Goods Dealers

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PRICES—REASONABLY LOW.

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GIES GEAR CO.
441 E. Fort St., DETROIT, MICHIGAN

Note the rigid 2-bearing sustaining frame that positively prevents all strains and makes installation easy.

YARD *and* SHOP

(*Continued from page 66*)

An Excellent Pump

Pumps on boats are among the most necessary items of auxiliary equipment. It seems that those made by the Lobee Pump & Machinery Company of Buffalo have remarkable qualities of efficiency, reliability and durability. They are available to furnish positive, automatic water circulation, which is proportional to the speed of the engine at all times. They will handle oil equally well, and are excellent for forced circulation of lubricating oil through coolers or renewing supplies from tanks to engines, and similar points. They are noiseless in operation and free from trouble.

A New Eighteen-Footer

A very durable and substantial little 18-foot runabout is now being built as a stock craft by the Paul S. Gesswein Boat Company, Bergen Beach, Brooklyn. This boat is being finished with the best of materials, and planked in full length white cedar. The flooring of the cockpit and the decking is of tongue and groove pine, which is covered with ten-ounce canvas. The hull is properly finished with paint and a gloss black has been adopted, with a white arrow line, and white boot topping. The power plant which will be used is an inexpensive one, so that it is possible to deliver the boat complete for considerably under a thousand dollars. Complete equipment is furnished, which includes fire extinguisher, life preservers, whistle, lamps, pump, flagpoles, anchor and line, as well as the necessary control equipment for the engine.

Of Interest to Shops

The Bridgeport Brass Company recently printed a graphical chart, which enables a user to quickly and conveniently figure the weight of brass rod necessary to produce one thousand screw machine parts of known dimensions. So many requests were received for this chart that the first edition was quickly exhausted, and it has been necessary to reprint a new edition. This is now ready and available for distribution, and copies will be gladly sent to any shop foreman or mechanics, who have use for this device. A request for a Rod-O-Graph to the Bridgeport Brass Company, Bridgeport, Conn., will quickly bring one of these handy charts to you.

Cruising Across the Continent

On first noticing the head of this item, one is led to remark that it can't be done. However, three modern motor boat enthusiasts have left Astoria, Oregon, en route to New York, in a small boat, which they expect to sail or, more properly, motor across the continent by various available water routes to the East Coast. The men who hope to demonstrate the possibility of sailing across the United States are F. S. Wilton, John E. Hoag and Val Woodbury. They have embarked in a light boat, which is powered with two Evinrude outboard engines and are now on the way up the Columbia River. About 870 miles from its mouth they plan to navigate the Snake River to Lewiston, Idaho. Between that point and Livingston, Montana, there does not happen to be any water, and it will be necessary to portage the boat for a distance of 250 odd miles across the Continental Divide. On reaching Livingston, they will again embark in the boat, and will descend the Yellowstone River to the Missouri, thence to the Mississippi, and thence through the Illinois River and the Illinois and Michigan Canal to the Great Lakes. From the Lakes their way lies via the St. Lawrence and Richelieu Rivers, through the Champlain Canal and Lake to the Hudson River, with a final termination at New York. Arrangements have been made for the complete story of this wonderful journey, which will be published in MoToR BoatinG, beginning as soon as the voyage has advanced sufficiently far to make a story possible.

Dangers of Gasoline

There has recently been published a book which should prove of great interest to yachtsmen who use gasoline more freely in many ways than the automobilist. It is called Automobile Gasoline: Its Dangers and Tests by Gill, and is published by J. B. Lippincott Company, Philadelphia. This book deals with the methods of production of gasoline, and with the dangers which are present when it is carelessly handled. Illustrations are included, and numerous instances are cited of the peculiar action of gasoline vapor in causing fire at points far remote from the source of the vapor. While the use of gasoline in internal combustion engines is entirely safe, it is not free from the fire hazard if the fuel is carelessly treated. Every user of gasoline should be familiar with the safe ways of handling his fuel, and this little book will do much to teach him the proper ways of doing this.

A Peculiar Mistake

In the last issue of MoToR BoatinG, in the advertisement of the Durkee-Guinan Company, the address was incorrectly given as 29 Smith Street, instead of 29 South Street. Due to some poorly hand written copy, it was difficult to decipher the correct name, and unfortunately the incorrect one was used. While the postal authorities are able to find this firm at their correct address, it is better for all interested to check up on their lists to be sure that the South Street address is the one which is being used.

Now—An Evinrude Camp Stove

The Evinrude Motor Company, Milwaukee, Wisconsin, known favorably all over the world for their complete line of small boats and small boat motors—both inboard and outboard—are now also manufacturing a complete line of camp stoves.

This announcement reveals the fact that the Evinrude Motor Company has been contemplating the camp stove line for some time. In fact, two years have been spent in the study, inspection and testing of the best and most recent efforts of private inventive genius. The stove selected produces a blue, hot flame like city gas. On actual test in the laboratories of one of America's foremost universities this flame has proven to be the most intense known to camp cooking—producing double the heat.

Other features about Evinrude camp stoves are equally as important as this great efficiency heat, and a very interesting booklet, describing its other advantages, is being prepared and will be mailed to any one on request. Write for it today.

The A. M. F. Rotary Pump

The American Machine & Foundry Company of Brooklyn is probably one of the best equipped organizations in America, and turn out the most highly effective, thoroughly efficient, best constructed machinery for various industries. Their engineering department includes a large staff of engineers and draftsmen, constantly studying and perfecting the latest and improved machinery, and the possibilities of improving various machines in a great many different industries. Years ago they perfected probably the most perfect piece of machinery for the making of cigars and cigarettes that has ever been developed. Today they control the making of cigarette machinery throughout the entire world, to the extent of nearly 100 per cent of the world's machinery of this type. This alone is a big enough business to warrant their tremendous organization.

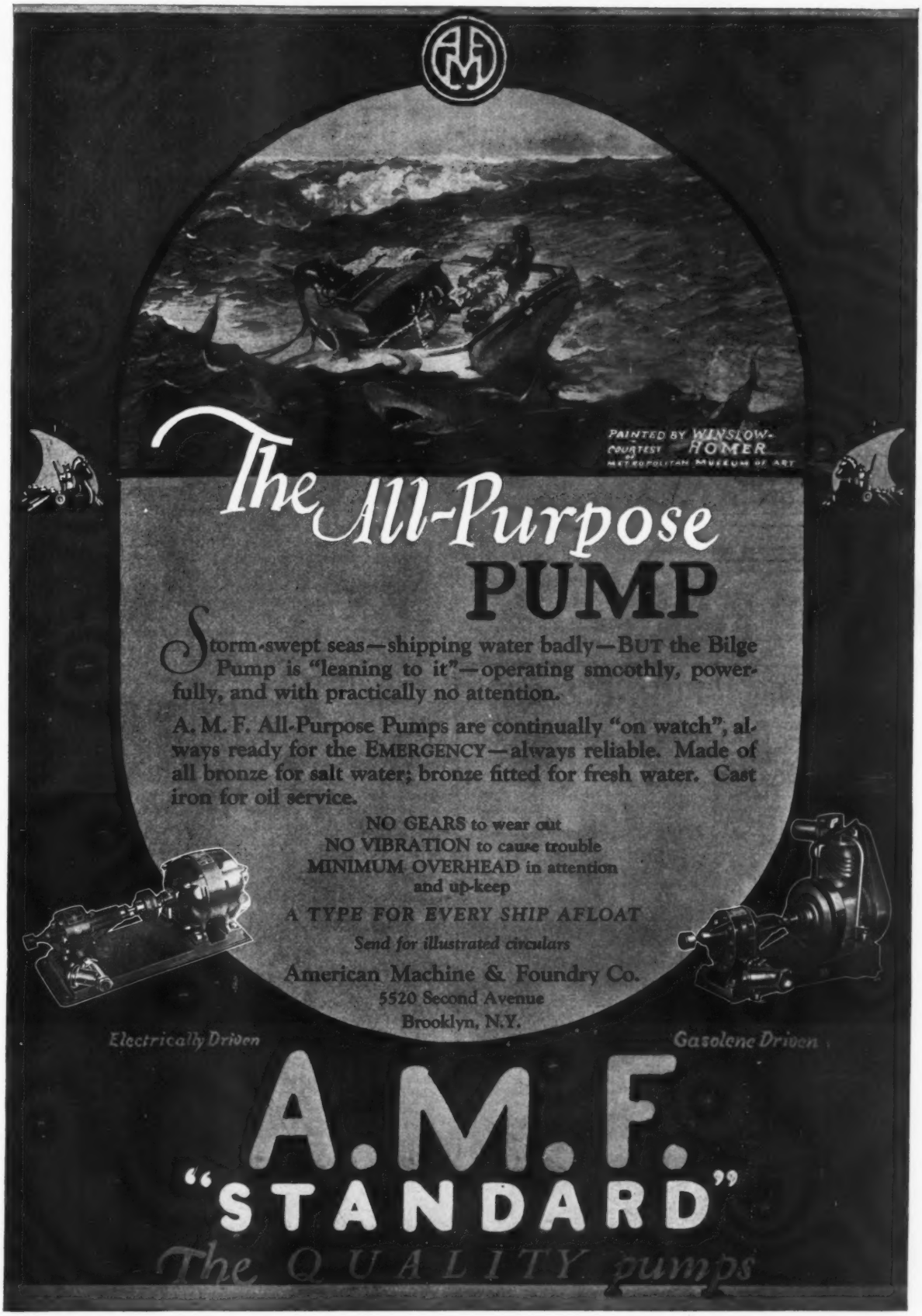
Bread wrapping machinery, multiple duplicating machinery (in the lithograph trade), rotary pumps, candy and other small packing machinery, automatic weighing scales, etc., and similar lines have added to their broad machine making experience.

Getting into the pump problem, they have developed a rotary pump that runs almost noiselessly, operates at such high speed that it can be directly connected to either gasoline or electric motors without the necessity of reduction gears, which results in lost power. These are an added source of trouble, and involve certain replacement because of wear and tear. They also form an added source of waste through gear lubrication that is eliminated in the A. M. F. pump.

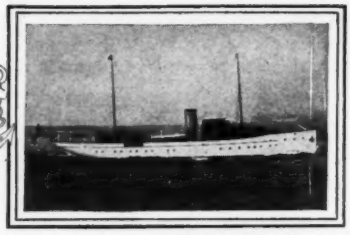
The high speed and smooth operation of the A. M. F. pump does away entirely with the pulsating stream of water, giving a steady, even flow which is particularly desirable where the pump is used for water, oil circulation or fire emergency. By a quick change the A. M. F. pump can be switched from bilge pump or deck washing to meet the dread emergency fire. Like all A. M. F. machines, this pump is the best on the market, therefore, naturally does not sell at the cheapest price, but is certain to last longer, and with less attention than the less scientifically constructed pumps now on the market.

Captain Charles G. Anderson of the new houseboat Nirvana, owned by Rodman Wanamaker, has been using these pumps at such satisfaction that he has ordered additional ones for other purposes. By reason of the rotary, positive action of these pumps, they will last indefinitely, and ship's captains find increasing pleasure in their use.

(*Continued on page 112*)


PAINTED BY WINSLOW HOMER
COURTESY OF METROPOLITAN MUSEUM OF ART
The All-Purpose PUMP
Storm-swept seas—shipping water badly—BUT the Bilge Pump is "leaning to it"—operating smoothly, powerfully, and with practically no attention.
A. M. F. All-Purpose Pumps are continually "on watch", always ready for the EMERGENCY—always reliable. Made of all bronze for salt water; bronze fitted for fresh water. Cast iron for oil service.
NO GEARS to wear out
NO VIBRATION to cause trouble
MINIMUM OVERHEAD in attention and up-keep
A TYPE FOR EVERY SHIP AFLOAT
Send for illustrated circulars
American Machine & Foundry Co.
5520 Second Avenue
Brooklyn, N.Y.
Electrically Driven
Gasolene Driven
A.M.F.
"STANDARD"
The QUALITY pumps

Todd Built and Todd Conditioned



The Motor Yacht "Alician" built and outfitted completely in 1924 in our Seattle, Washington Yards for Mr. C. W. Wiley, former Commodore of the Seattle Yacht Club.
Fine craft of this character find their natural base at Tebo Yacht Basin or other yards of the Todd Shipyards Corp.

TEBO YACHT BASIN is nationally and internationally known for the very widest facilities in the building, repairing and reconditioning of fine yachts, both large and small.

No Yard or Basin in the United States excells Tebo in organization and craftsmanship—in every phase of marine artisanship from cabinet work to Diesel Engine Installation—in contractual relationship and the carrying out of delivery agreements.

Tebo Yacht Basin facilities for storage are convenient and accessible.

TEBO YACHT BASIN COMPANY

Plant of Todd Shipyards Corporation
Foot of 23rd Street, Brooklyn, New York

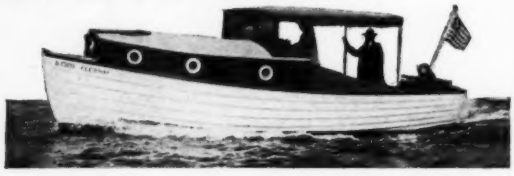
Shipbuilders and Repairers
Engineers
Diesel Engines and
Diesel Engine Installation

TODD

Parsons Turbines
Oil Burning Equipment
Electric Drive Installation

The New "FURNESS 25"

A RECOGNIZED leader in Class No. 1, standardized cruisers. Here is a sturdily built, seaworthy boat of handsome lines and wholesome accommodations; a real family cruiser. On this craft you will find all quality and no meaningless frills that boost production cost. It is the most remarkable cruiser value ever offered and has in back of it thirty years' experience of builders of good boats. A four-cylinder Kermath is regular equipment, giving a speed of 10 miles per hour.



Ready to Cruise $1695 F.O.B. Factory

You buy this craft complete, ready to cruise. The berths, 6 feet 4 inches, are built-in type and are fitted with green denim covered, comfortable mattresses. The galley is amidship. Other accommodations include toilet, icebox, mirror, clothes rack and plenty of shelf space.

SPECIFICATIONS:

Length, 25 ft. 10 in. Beam 8 ft. 3 in. Draught, 24 in. Cockpit accommodates 9 persons. Speed, 10 M.P.H. Gas consumption, 1½ gallons per hour. Gasoline capacity, 25 gallons. Motor, 12 H.P., 4-cylinder, Kermath with enclosed reverse gear. Bosch magneto with impulse coupling attached.

EQUIPMENT:

25-lb. Galvanized Anchor. 50 foot. Anchor Line. Mooring Lines. Electric Lights in Cabin. 2 Life Preservers. Yacht Ensign. Fog Horn. Fire Extinguisher. Electric Signal Lights. Flag Poles. 6-Volt Storage Battery. Any desired name and registration number will be placed on the bow free of charge.

Terms if desired in New York and Vicinity.

Write today for further information.

FURNESS BOATS

SEA BRIGHT NEW JERSEY

Telephone: 216 Sea Bright

Through the Trent Canal

(*Continued from page* 88)

and then cruised down the canal to the Kirkfield lock, where we found a very congenial lock-tender who said he would look after our boat if we would tie up at the lock, and then we took a taxi to Kirkfield and spent the night at the famous Kirkfield Inn, which, I am sorry to say, was recently destroyed by fire. This inn was more like a club house than a hotel and was used as a summer home by a large number of people prominent in Canadian society. We had to remain over night, and on Monday morning went to the lock and were pleased to note that the lock-tender had locked Red Bird with another boat that had come along and shortly after 8 o'clock we were again on our way through the canal which connects Balsam Lake with Lake Simcoe, the largest of all the inland lakes of this group. We passed locks Nos. 37, 38, 39 and 40 of the Simcoe division of the Balsam Canal and through lock 41 at Gambridge by 10 o'clock. Like the preceding day, it was a bright, sunshiny day, with little or no wind, and when we came out of the canal into the broad, smooth waters of Lake Simcoe for a run of 17 miles to the narrows which connect Lake Simcoe with Lake Couchiching, we made good time, and passed through the narrows into Lake Couchiching, another beautiful lake, and, like the lakes farther down in the Kawartha and Scugog chain, well stocked with game fish.

We pushed our way through Lake Couchiching to the Washago Canal and at noon were locked out of the Washago Canal with its drop of 20 feet into the Severn River. Coming out of the canal into the Severn, boats going on through to Georgian Bay proceed down stream in the Severn to Sparrow Lake. However, as we were at this time only one mile up stream to the Severn Bridge in the town of Severn, we were very quickly tied up at our destination, unloading grips, rubber coats, lunch baskets and all the paraphernalia which the average boatman uses, apparently for the purpose of encumbering progress on trips of this sort. It struck me as amazing when I saw the dunnage on the dock, that there had been any room in the boat for Dan and me.

An hour later the great flat-wheeled wagon with Red Bird as its load was rattling along the stone highway towards Gravenhurst, and in another hour it seemed that winter had broken in on the scene, as at this same hour and day a stormy period began which prevented any small boat navigating the waters of Simcoe until winter itself had actually arrived.

Two More Diesel Conversions

(*Continued from page* 44)

turning 450 r.p.m. In addition, there will be a 7½ h.p. single cylinder machine, driving a 4½ k.w. generating set. The new installation with the present fuel tanks will double the cruising range, and extend this to 3,000 miles. The fuel saving will be decided, since fuel oil costs about six cents per gallon, as compared to twenty-five cents for gasoline.

Another installation of Mianus Diesel engines is being made in the 93-foot schooner yacht Evelyn Moore, in which a smaller gasoline auxiliary engine is being replaced by a four-cylinder, 70 h.p. Mianus Diesel engine, which develops its power at 400 r.p.m. By reason of the increased power and durability of the new power plant, the yacht will be a more seaworthy craft, and faster under power.

The New Bayside Gulls

The Bayside Yacht Club has planned and is building a number of boats in a new one-design class which have been christened Bayside Gulls. These new boats are all Marconi slooped rigs, and are 16 feet in length with a beam of 5 feet 6 inches. The boats were designed for the club by Charles D. Mower, a naval architect, and are exceptionally fast and able little boats. No doubt other clubs would be interested in organizing and building classes of similar boats, and Charles D. Mower is prepared to furnish full particulars concerning them.

Class Racing Popular on West Coast

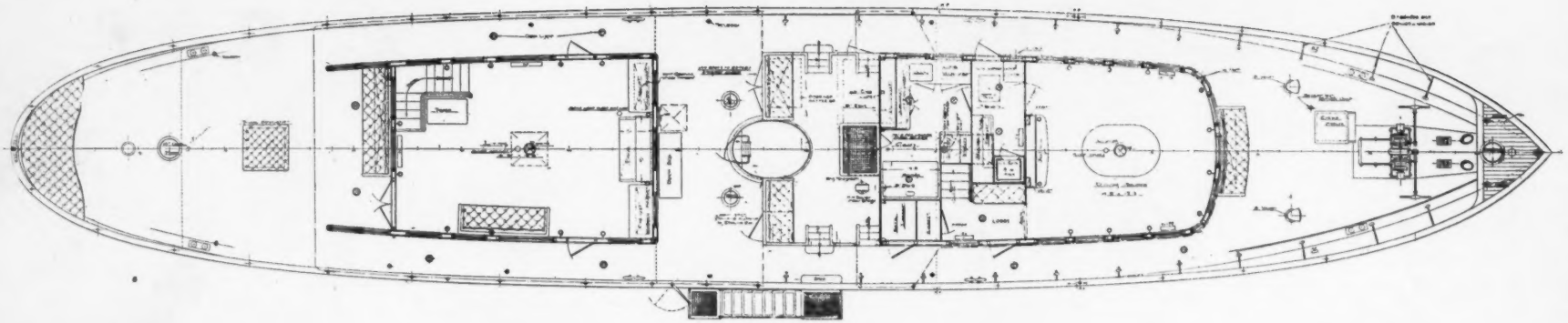
The Portland Motor Boat Club, Portland, Oregon, has taken up with much enthusiasm a program of racing for several different limited classes, in which competition will be held throughout the summer. Several new boats have been completed to take part in this racing, and the most popular seems to be the 505 cubic inch class. The club has taken steps to join the American Power Boat Association and is using its rules in the conduct of its races.

Advertising Index will be found on page 166

Diesel Yacht
JANEY III

Designed by John H. Wells, Inc.

Naval Architects JOHN H. WELLS Inc. Yacht Brokers

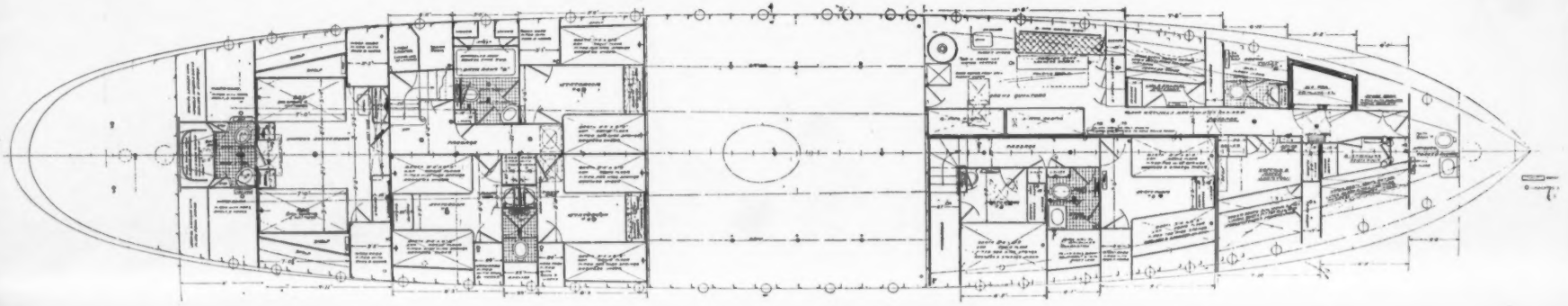


The Interior Arrangements *of* JANEY III

The Ability of the Yacht Designer to Use to Advantage All Corners of a Hull, Is Well Illustrated in the Compact Arrangement of This Boat

IN laying out the interior of a large boat, the naval architect is confronted by many problems. The natural desire is to include all conveniences and comforts possible. Again, there are the desires of the owner to be met and provided for. Janey III, the new Diesel yacht designed by John H. Wells, Inc., for W. O. Briggs of Detroit, has given the architect a wonderful opportunity to display his ability. The interior arrangement occupies every cubic foot of space to some useful purpose. There are many lockers and cupboards built into places which would otherwise be unused, and the arrangement of the various staterooms and other habitable portions of the boat has been worked out most carefully to utilize the available space to the utmost.

The dimensions of this boat are 118 feet 7 inches in length with a beam of 21 feet 7 inches, and a draft of 7 feet 3 inches. While this is not the largest boat ever undertaken, it certainly is provided with as much comfort and convenience as many other vessels of larger size. It has the distinction of being the largest Diesel yacht launched so far this year. Several similar boats also from the boards of J. H. Wells will shortly be constructed in various shipyards.



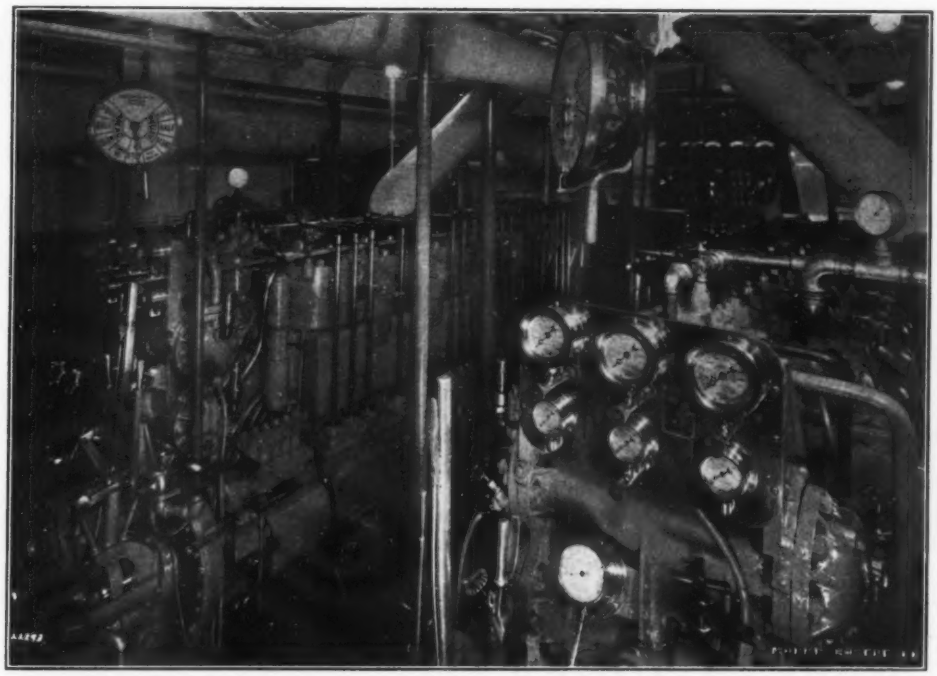
Naval Architects JOHN H. WELLS Inc. Yacht Brokers

WINTON

JANEY III

Is Added to the Roster of
Fine Yachts Powered with

WINTON DIESEL ENGINES



Engine room of the Janey III showing her two 200 H.P. Winton Diesel Engines. Two 7½ K.W. Winton electric generating sets are also used.

THE Janey III, designed by John H. Wells, Inc., and built by the Consolidated Shipbuilding Corp., is assured not only reliable and economical power, but also all around superior performance that only Winton engines can give. Winton Diesels are preferred by yacht owners, naval architects and ship builders who demand the most efficient type of marine propulsion.

THE WINTON ENGINE COMPANY

CLEVELAND, OHIO, U. S. A.

New York—A. G. Griese, Inc., 331 Madison Ave.
Los Angeles—F. G. Bryant, 210 F. W. Bruan Bldg.
Boston—Walter H. Moreton Corp., 780 Commonwealth Ave.
New Orleans, La.—A. Baldwin Company
Seattle—H. W. Starrett, Sunset Engine Company
Washington—R. L. Fryer, 430 Transportation Bldg.
Cleveland—F. C. Erdman Co., Union Trust Bldg.

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

Builder of Janey III
Consolidated Shipbuilding Corp.

WE also build from our own designs and specifications Steel and Wood Yachts, Cruisers and Launches, and

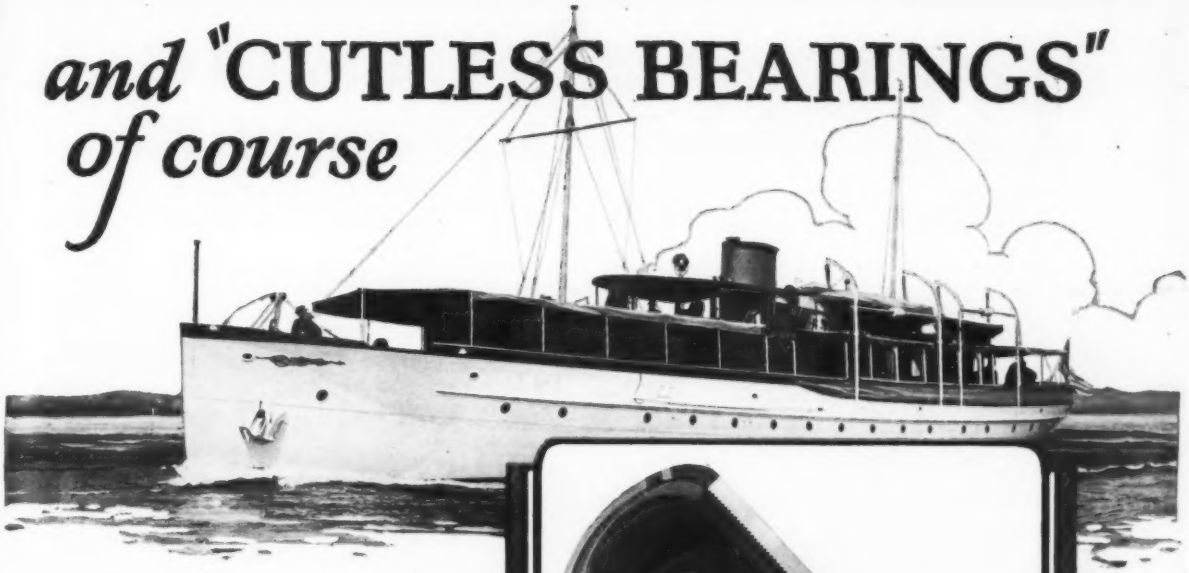
SPEEDWAY ENGINES

Write for literature on the type of boat or engine in which you are interested.

CONSOLIDATED SHIPBUILDING CORPORATION
MORRIS HEIGHTS **NEW YORK CITY**

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

and "CUTLESS BEARINGS" *of course*



Nothing was spared to make the Janey III the last word in efficiency, consequently when the matter of stern bearings came up the words "Goodrich Cutless Bearings" were promptly written in the specifications.

This remarkable rubber-surface bearing has set a new standard of bearing service and the marine world has recognized it by widespread adoption on all sizes and styles of craft.

THE Goodrich "Cutless Bearing" is lubricated only by water.

Shaft scoring is practically eliminated and vibration absorbed. It will outwear any other type of bearing.

Operates under sandy, dirty water conditions impossible in other bearings. Supplied for any size craft.

Distributors:—New York City—Topping Bros.; Boston—Walter H. Moreton Corp. and United Fisheries Company; Gloucester, Mass.—United Fisheries Company; Jacksonville, Fla.—Gibbs Gas Engine Co. of Florida; Mobile, Ala., New Orleans, La., and Galveston, Texas—A. K. Miller Engineering Company.

THE B. F. GOODRICH RUBBER CO.
Established 1870 AKRON, OHIO

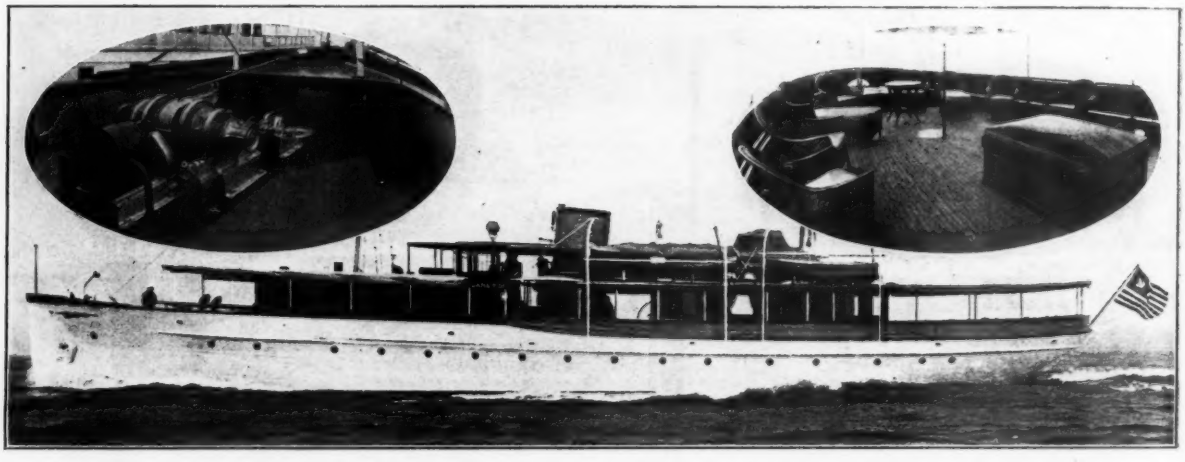
Goodrich
Cutless Bearings

BEST IN THE LONG RUN

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

KUHLS' ELASTIC SEAM COMPOSITION

Used Exclusively on Janey III



Janey III, a new 119 foot Diesel yacht just put in commission for Mr. W. O. Briggs of Detroit. Above: Views of the forward and after decks, showing deck seams leak proofed with Kuhls' Elastic Seam Composition.

THE JANEY III sets out on life as the most advanced design in Diesel yachts of her size. Her architect, John H. Wells, has included in Janey's equipment everything that a yachtsman could want for the comfort and pleasure of himself and guests. And when thoughts of the happy parties aboard turn to dancing, the board decks offer a "floor" equal to any ashore.

Gliding over the boards whose seams are filled with Kuhls' Elastic Seam Composition possibly means little to the guests, but to the host and master of the yacht it means much. It tells him more of the reasons why the builders of the Janey, the Consolidated Ship Building Corp., used Kuhls' Elastic Seam Composition. He notices that beneath a tropical sun the seam composition does not become sticky nor in a cooler clime does it get brittle. And that under the swing and glide of many feet the seam composition does not track or check.

Kuhls' Elastic Seam Composition adheres tightly to side of seams and retains its original elasticity and waterproofing qualities through a period of more than ten years. It yields to the swelling and shrinking of planking, guaranteeing a leak proof deck at all times.

The best builders of motor boats, yachts and ships and the United States Government use Kuhls' Elastic Seam Composition.

Carried in stock by marine supply dealers, ship chandlers and hardware stores.

Five colors—White, Gray, Yellow, Black and Mahogany

OTHER KUHLS MARINE SPECIALTIES

Elastic Flat Yacht White
Elastic Glazing Composition
Elastic Gloss Yacht White
Elastic Deck Varnish
Elastic Trowel Cement

ELASTIC SEAM COMPOSITION TRADE MARK

H. B. FRED KUHLS

Sole Manufacturer *Established 1889*

65TH STREET AND THIRD AVE. BROOKLYN, N. Y.

Naval Architects JOHN H. WELLS Inc. Yacht Brokers

We wish to disclaim any attempt to have this picture look like the Janey III, or the guests like friends of Mr. Briggs. Mr. Irvin, the artist, and Mr. Briggs have never met, and Mr. Irvin has done the very best he could in the circumstances.

MR. BRIGGS' FLAG ON MR. BRIGGS' CHINA ON MR. BRIGGS' YACHT

WHEN the Janey III was built Mr. Briggs decided that the china and crystal service would have to be as ship shape as everything else. So he came to Ovington's and there commanded as complete and good looking a set as it has been our pleasure to produce—a service that he and his guests will enjoy every time a plate or glass is needed.

Many yacht owners might well follow this example for, strangely enough, there are some who while they would not tolerate an uncoiled rope, or a tarnished bit of brass, will permit in the galley china that might grace a strawberry festival in Comanche, Texas, but is very much out of place on any yacht with a claim to smartness.

We have succeeded, we think, in bringing sensible prices to yacht china and we are delighted to submit designs to members of recognized yacht clubs.

OVINGTON'S

"The Gift Shop of Fifth Avenue"

Fifth Avenue at 39th St.

Naval Architects JOHN H. WELLS Inc. Yacht Brokers

Fire Extinguishers Required by Latest U. S. Government Regulations

THE box of sand and the bag of salt have been declared by the U. S. Steamboat Inspection Service inadequate for fire protection on motor boats.

It is now demanded by the Government before a license is granted to a motor boat owner that his boat shall be equipped with an approved fire extinguisher.

This wise Government regulation is fully met when a motor boat carries the officially approved Pyrene hand fire extinguisher.

Be ready to fight fire intelligently when you are miles from shore,—there is safety afloat with Pyrene in the boat.

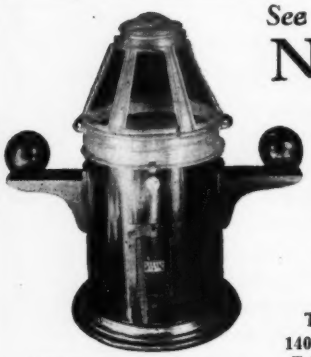
The Diesel Yacht Janey III. Is Equipped with Pyrene Fire Extinguishers

In addition to the Pyrene 1 and 1½ quart hand fire extinguishers we make the Phomene 2½ gallon (Foam Type) extinguisher.

Pyrene Safety Products are sold by Ship Chandlers, Automobile and Hardware Dealers everywhere.

PYRENE MANUFACTURING CO.
Makes Safety Certain
NEWARK, N. J.

Pyrene
KILLS FIRE
SAVES LIFE



Standard Binnacle for Mr. W. O. Briggs' Yacht Janey III.

See
NEGUS
FOR
Compasses and Compass Adjustment, Yacht Logs, Marine Glasses, Charts,

Special attention to special requirements

T. S. & J. D. NEGUS
140 Water St., New York
Tel. 1669 John; 3388 John
Established-1848

Janey III, A Wonderful Boat

(*Continued from page* 14)

The range is adapted to use either coal or oil, and the compartment is ventilated with windows and ports, and also with a Sirocco exhaust fan. A special china and glass service, designed especially for Mr. Briggs, has been supplied by Ovington's, New York, who specialize in high-class yacht equipment of this kind. Quarters for the crew are arranged forward, with three staterooms, general crew's space, two toilets, hot water heating plant, and mess room. Sound-proof bulkheads separate these quarters from the owner's quarters forward. The crew will comprise some twelve men who have all been fitted out with complete uniform equipment by Schellenberg & Sons, yacht outfitters of Brooklyn, N. Y.

Perhaps the most important part of the ship is the engine room, which is installed amidships, and is separated by steel bulkheads at either end. In fact, the hull is completely divided into five water-tight compartments by steel bulkheads. The engine room itself is 21 feet in length and accommodates the two main propulsion engines, as well as all of the auxiliary machinery necessary. The main engines are 6-cylinder, model III, Winton Diesels, with a bore and stroke of 9½ by 14 inches. They are directly reversible and develop 200 h.p. each at 350 r.p.m., and drive through a pair of bronze Hyde propellers made by the Hyde Windlass Co., of Bath, Me. These heavy propellers are carried and supported by outboard struts which are provided with the new cutless bearings as made by the B. F. Goodrich Rubber Company of Akron, Ohio. The auxiliary electric machinery comprises two 6-cylinder gasoline engine Winton generating sets of 7½ k.w. capacity. In addition, a bank of Edison storage batteries is carried, which are all interconnected by means of a switchboard, so that current can be taken from any or all sources at the same time. The compressor for auxiliary air purposes is a model 2x W-18, also made by the Winton Engine Company, but driven by an electric motor. There are further a large number of supplementary machines, such as electric bilge pumps, manifolded to each compartment, a battery of pumps for air, pressure water system for salt, and fresh water, sump tank with automatic electric pump discharge, Clothel ice machine, and a transfer oil pump.

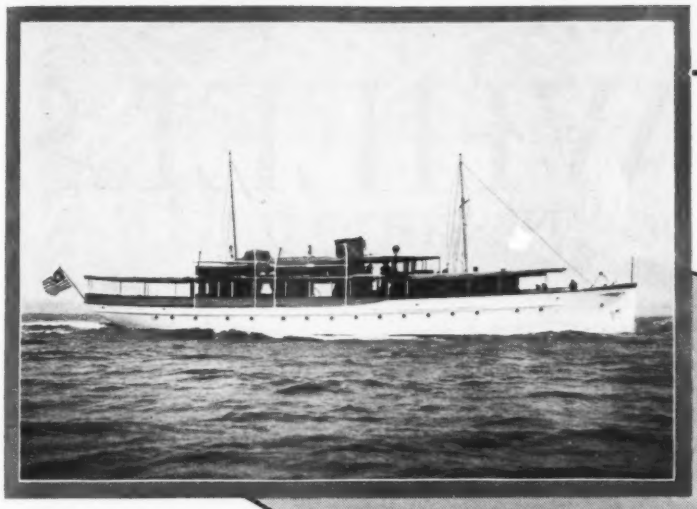
Three small boats are carried on the upper deck, two of which are power driven. The larger of the pair is provided with a Speedway engine, while the smaller one has a Universal Flexi-four. In order to raise the boats to this deck, an electric windlass, built by the American Engineering Company, is provided, which raises them quickly to their places.

Other electrical deck machinery consists of an American Engineering Company's anchor winch, which is placed on the forward deck. A large Carlisle & Finch searchlight is also mounted over the bridge, where it is available when needed. Both the standard compass mounted on the boat deck forward and the ship's steering compass on the bridge were installed and adjusted by T. S. & J. D. Negus, the New York experts in this equipment.

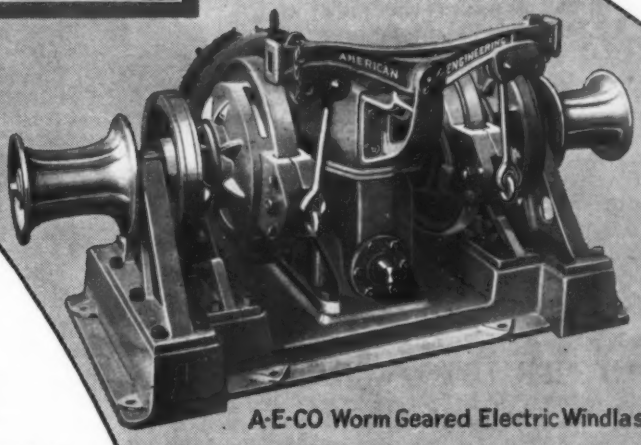
On trial trips the boat maintained an average speed of better than 13 knots, which is rather unusual, considering the beam of the vessel, and the amount of power installed.

Several other vessels of this type are now being designed by Mr. Wells, although they are somewhat larger. Janey III is distinguished by being the largest Diesel yacht built this year.

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers



Carrying on the tradition of over half a century



A-E-CO Worm Geared Electric Windlass

A-E-CO Auxiliaries were chosen for the "Janey III"

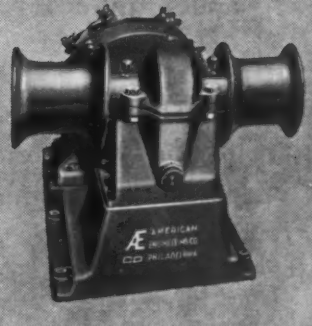
The A-E-CO Electric Windlass and Electric Boat Hoist with which she is equipped are shown in the illustrations on this page.

It is a significant fact that for more than sixty years, most of the finest yachts built in America have been equipped with steerers, windlasses, hoists, capstans or other auxiliaries made in our shops.

Superiority of design, accuracy of operation, and unequalled dependability have won for these auxiliaries an enviable reputation throughout the yachting world—a reputation that has grown with years.

Today, A-E-CO Auxiliaries are found on the great majority of the most modern and best equipped yachts—such as the Ohio, Dolphin, Goodwill, Moby Dick, Delphine, Miramar, Taormina, Dauntless and Sialia, to name only a few of the best known.

Complete details—descriptions, illustrations, prices—of our entire line of Yacht and Motorboat Products are given in YACHT SECTION, CATALOG 21. Send for a copy today.



A-E-CO Electric Boat Hoist

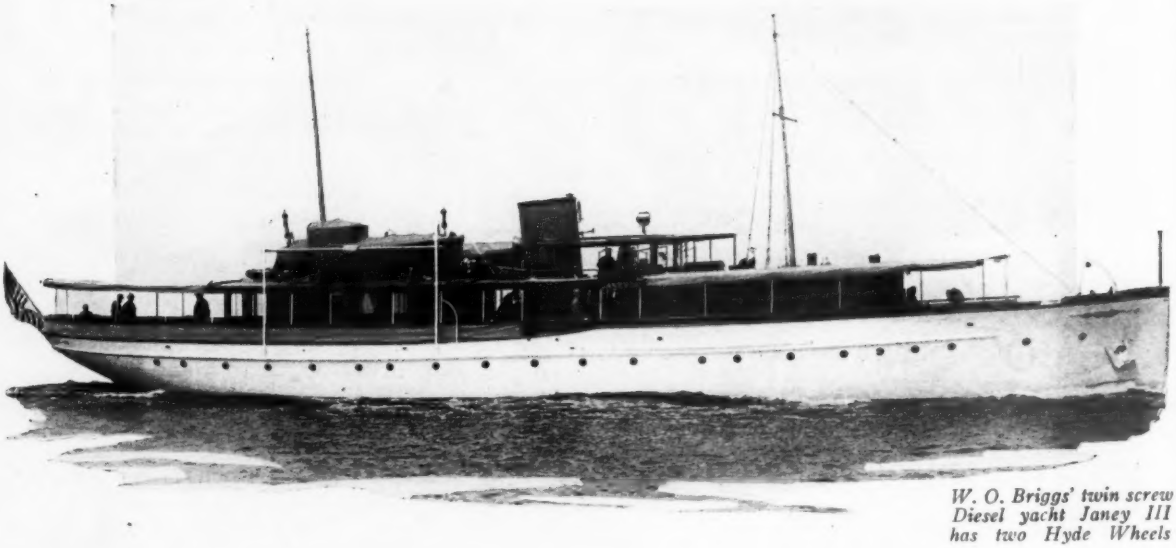
American Engineering Company

2419 Aramingo Avenue
Philadelphia, Pa.

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

Janey III is propelled by two

HYDE WHEELS

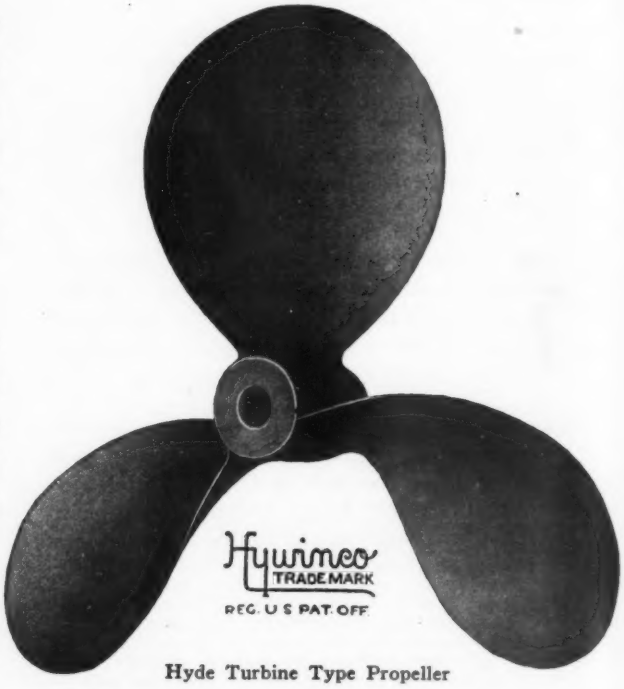


W. O. Briggs' twin screw Diesel yacht Janey III has two Hyde Wheels

THE TRUE screw design and large blade areas of the Hyde Turbine Propeller give the maximum miles per hour. That's why Hyde wheels were specified for the twin screw Diesel yacht Janey III, designed by John H. Wells, Inc.

Hyde wheels are made of manganese bronze having high tensile strength and are perfectly balanced. They are unexcelled in racing, cruising and towing service, as well as in fuel economy.

Write for booklet "Propeller Efficiency." It tells an interesting story.



Hyde Turbine Type Propeller

HYDE WINDLASS COMPANY

BATH, MAINE

Uniforms by Schellenberg

WE had the honor of furnishing the entire uniform equipment for the crew of the Janey III, designed by John H. Wells, Inc., for Mr. Walter O. Briggs. The wardrobe of each member includes correct clothing for every occasion, for dress or work, in fair weather or foul.

Uniforms
Insignia
Caps and
Yachting
Clothing

Our business is to interpret the right styles of wearing apparel for the yachtsman and his crew. Styles that appeal equally to the conservative and the fastidious, conforming in every respect with the best usages of yachting etiquette and custom.

For over seventy years we have been outfitting men who love boating. Among our regular patrons are numbered the owners of many famous yachts and prominent members of the country's most exclusive yacht clubs.

Apparel furnished by Schellenberg is not only correct in design and detail, but is faultlessly fashioned and made from carefully selected materials of the finest grades.

Reliable officers, crews and club attendants furnished without charge.

Let us send you our outfitting list and measurement blanks

B. Schellenberg & Sons

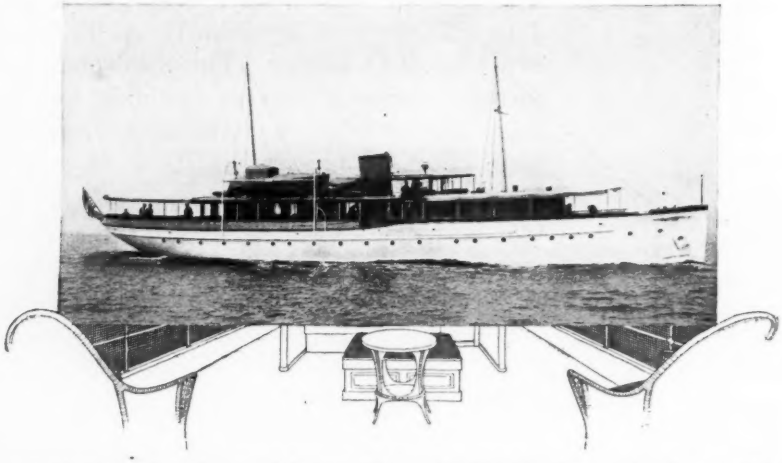
Telephone Cumberland 0804-0805

99 to 105 Myrtle Ave. **Brooklyn, N. Y.**

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

A Paris Gown

TEXTASOTE AWNINGS AND WEATHER CLOTHS ARE LIKE A PARIS GOWN—*the final touch of color and style for a beautiful lady!*



As planned by the architects, John H. Wells, Inc., the Janey III is dressed most harmoniously in golden khaki. As you come alongside there appears beneath a glowing blue, restful to the eyes and altogether smart, as it mirrors the dancing waves.

Textasote has set a new style in awnings, spray hoods, deck canvas, boat covers, hatchways and wherever duck is used. Leading architects welcome its gay colorings and splendid tailoring qualities. Being soft and pliable, it is easy to work, and because it cannot leak or rot, has an exceptional life wherever used.

This beautiful new processed duck comes in many weights and color combinations—described on request.

Write! Large samples of Textasote will be sent to any builder, architect or owner

The Pantasote Co., Inc.

250 PARK AVENUE AT 46TH STREET

New York

PANTASOTE was also specified for the 27 cabin window curtains of the Janey III. (RUSSIALOID is less expensive but, like PANTASOTE, will stand long, hard service for upholstery and cushions.)

Naval Architects JOHN H. WELLS Inc. Yacht Brokers

The DUO-ART REPRODUCING PIANO

The WORLD'S FINEST POWER AND SAIL YACHTS, GREAT PASSENGER LINERS AND SHIPS OF ALL NAVIES ARE EQUIPPED WITH MUSICAL INSTRUMENTS BUILT BY THE AEOLIAN COMPANY

JANEY III

JOHN H. WELLS, INC., *Naval Architects*

is the latest yacht to be equipped with
The DUO-ART *Reproducing Piano*

bringing aboard the playing of PADEREWSKI, HOFMANN, BAUER, GABRILOWITSCH, GRAINGER, GANZ, DE PACHMANN, CORTOT, NOVAES, MYRA HESS, etc., and solo concert pianists of international fame: GEORGE GERSHWIN, PHIL OHMAN, EDYTHE BAKER, FREDDY RICH, FRANK MILNE, the stars of Broadway in popular and dance music.

Only the DUO-ART meets the extremes of temperature, cold fog and hot sun. *Recent installations:* LEVIATHAN, W. K. Vanderbilt's ARA, Edward F. Hutton's HUSSAR IV, CHATTANOOGA *and* BIRMINGHAM, SANTA TERESA, U. S. S. ARKANSAS, VIRGINIA, etc., etc.

The DUO-ART *is obtainable in*

STEINWAY · WEBER · STECK
Wheelock · Stroud · Aeolian Pianos

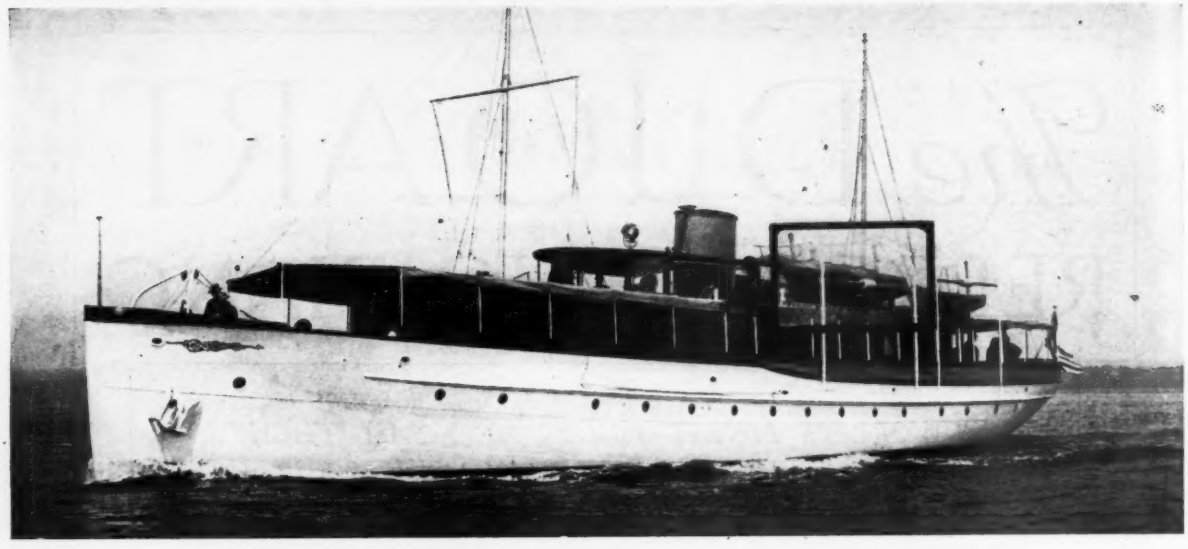
The AEOLIAN COMPANY

Foremost Makers of Musical Instruments in the World

Aeolian Hall · New York

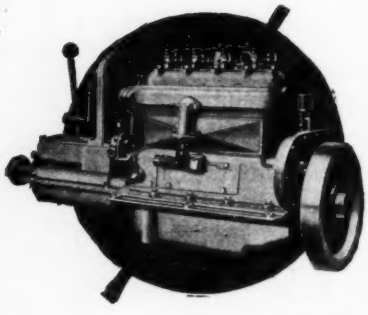
LONDON · PARIS · MADRID · MELBOURNE · SYDNEY

Naval Architects JOHN H. WELLS Inc. Yacht Brokers



Choice of the Universal Flexifour to power the tender (indicated in panel of picture above), gives to this busy little craft the same smoothness of power and dependability of the mother ship—the majestic Janey III.

Keeping Good Company With the Janey III



Flexifour specifications in brief: Four cylinders, cast en bloc; bore 2⅝", stroke 4", peak horsepower, 15 at 2000 R.P.M. Ricardo-type cylinder head; lighter pistons and rods; new type camshaft; higher compression ratio; longer valve opening; pistons ground, cylinders honed to glass-like smoothness.

Note new Bosch automobile type 6-volt, 2-unit electrical system, consisting of Bendix drive, starting and ignition switches, ammeter, etc. Supplied with Flexifour at even less cost than former equipment.

Where 15 smooth, *sure*, horsepower is needed is a pretty good place to look for a Universal Flexifour.

The main reason why you won't *always* find this greatest Universal is because we haven't built Flexifour long enough to even begin supplying everyone's needs. (The good, old Universal, you'll recall, developed but 12 horsepower at peak.)

That 25 per cent power increase has been achieved with the same bore-and-stroke as before, and with a 10 per cent fuel saving.

And with even more pronounced smoothness, pep—and RELIABILITY.

Write for details, mentioning size and type boat you wish to power.

UNIVERSAL MOTOR CO.

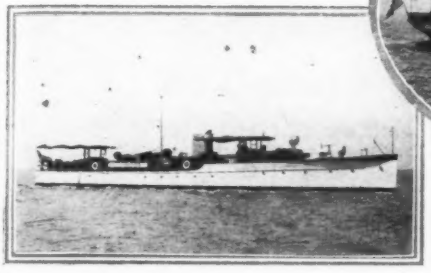
40 Ceape St. **Oshkosh, Wis.**

Universal Flexifour 15 H.P. MARINE MOTOR

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

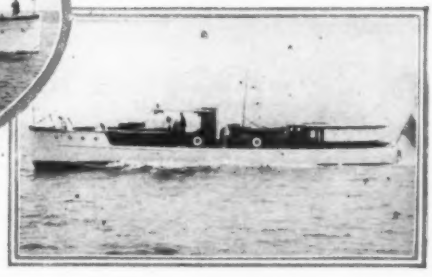
WELLS DESIGNED

Marold, 100 feet

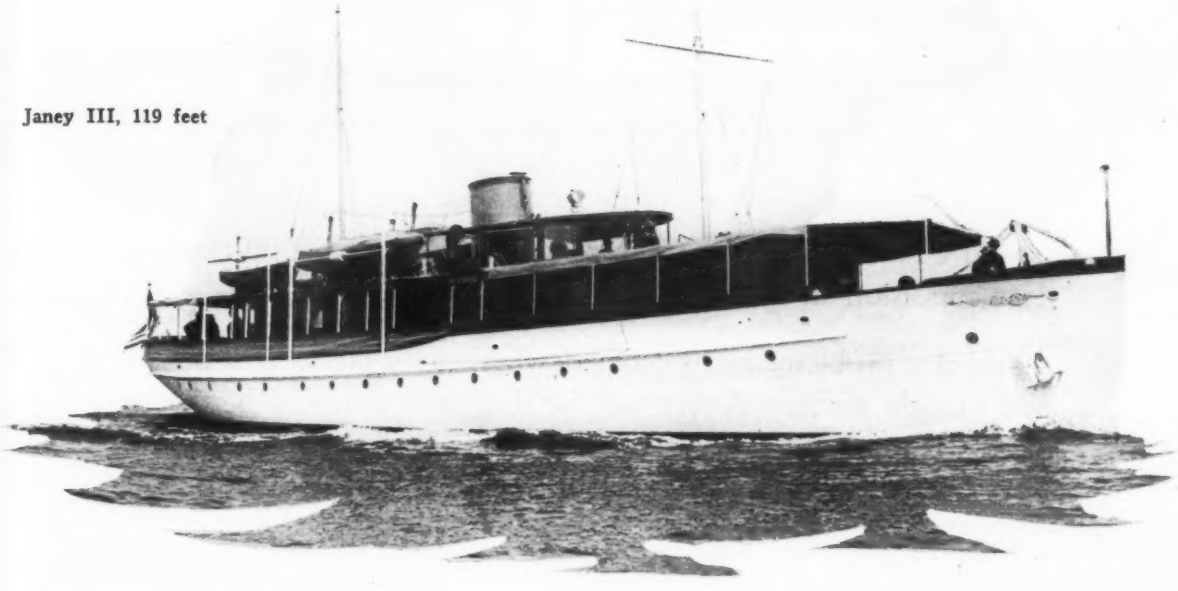


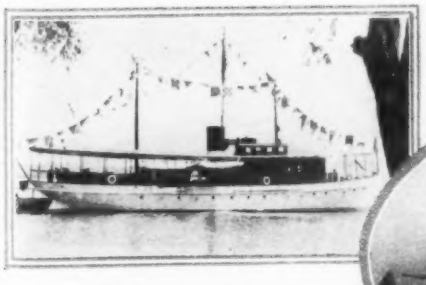
Clarinda, 98 feet

Janet, 76 feet



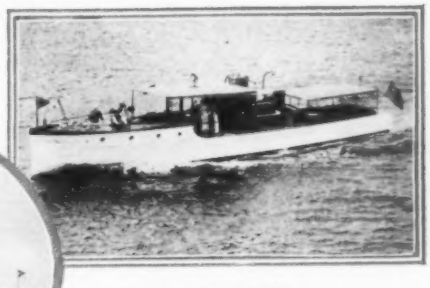
Janey III, 119 feet





Minahapa, 86 feet

Anado, 68 feet



Harmony, 66 feet

Naval Architects **JOHN H. WELLS Inc.** Yacht Brokers

THE completion of the 118 ft. Diesel Yacht "Janey III" brings a new type of yacht before the public, and is the latest of a number of successful designs by Mr. Wells and his organization. The comforts of the houseboat have been incorporated with the smart yacht type, having a cruising speed of twelve knots. The graceful, rakish lines are combined with staunch seaworthy qualities without top hamper. Several similar craft are now in design for next year's delivery.

Mr. Wells has a carefully selected organization of men who have had years of practical experience in steel and wood construction in shipyards and designing offices. Thus the client's requirements receive expert attention, whether the need be a new design or a used boat to meet some particular condition in service.

Yachting problems are welcomed whether for lakes, off-shore or Florida service. A type will be suggested that can be depended upon to be practical, with the assurance of satisfactory performance. A personal interview is solicited.

John H. Wells, Inc.

347 Madison Avenue, New York City

Telephone: Murray Hill 3126

Service : That's : Different

Safety
Dryness
Comfort
Stability

Shallow Draft
Weedless

STANDARD 25 FOOT 40 MILE SEA SLED RUNABOUT

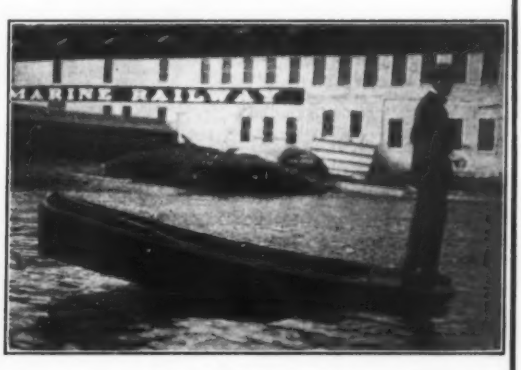
Both the 25 foot, 40 mile per hour Sea Sled Runabout, engined with a 6-cylinder Hall Scott, or the smaller 22 foot, 33 m.p.h. Sled with the new 6-cylinder Peerless can be had in a few days. Real all weather runabouts.

The engine is aft so the passengers ride ahead of its noises and smells. The single surface propeller insures the simplest mechanical arrangement, weedlessness, extreme shallow draft, and the highest speed efficiencies.

SEA SLED DINGHIES

SIZES 11 AND 13 FEET

A boat whose unique advantages make an instant appeal to discriminating boatmen, hunters and fishermen. Commodious, non-capsizable, dry and absolutely safe. A combined raft, spring board, row-and outboard motor boat, in a beautiful brass fitted, bright mahogany Sea Sled Dinghy.



SEA SLED COMPANY, LIMITED

WEST MYSTIC, CONNECTICUT

The Dayton Was Selected to Supply Running Water for the "Atlantic"

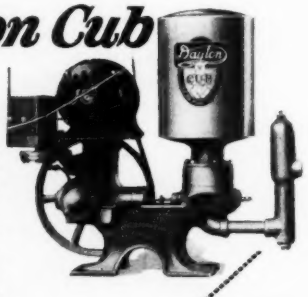
There is deep significance behind the fact that designers of the "Atlantic," a 185 foot Schooner Yacht, owned by Cornelius Vanderbilt, specified a Dayton Water System to provide running water aboard this palatial craft.

Wherever the desire is strongest for the best—in country estate or suburban home—wherever quality is the watchword, Dayton is the logical choice of water systems. Made in many sizes and pumping capacities, there is a Dayton for every requirement, from the needs of the "Atlantic" down to the smallest type boat.

Back of each Dayton Pump is over 16 years of manufacturing experience—in fact, we are the pioneers in the field. Every Dayton Water system is unconditionally guaranteed by the factory to give satisfying, dependable service—the kind you have hoped for.

NAVAL ARCHITECTS AND BUILDERS are invited to use our free service in selecting the proper equipment for their requirements.

The Dayton Cub
200 Gallons per Hour



For the average boat Dayton Cub is ideal. Small and compact, it may be quickly installed anywhere—occupies but little space. Largest capacity of any pump for the price. Inexpensive to operate—practically no maintenance cost. Supplies water under pressure to all parts of boat. The best small pump ever built—yet it costs only $85.00.

The Dayton Pump & Mfg. Co.
DAYTON, OHIO
N. Y. Office
224-226 East 42nd Street

Return the coupon for new free booklet *Dependable Water Service*

The Dayton Pump & Mfg. Co., Dayton, O.

Please send at once your free booklet DEPENDABLE WATER SERVICE.

Name .....
Street .....
City .....

"Dayton" Pumps
Make the water do the running

Detroit's Main Spring

(*Continued from page* 15)

scores every night in the week for the Indianapolis Star.

Eddie made good as a bowling reporter which soon gave him a permanent position in the Sports Department of the Star. When the first Indianapolis speedway race was held in 1909, it was Eddie who was assigned to cover it for his paper. The speedway of that day was a very crude affair. So many fatalities occurred in the first race that it was decided to lay a brick track and bank the turns in the interest of safety. However, it was not until 1911 that the first 500 mile race was put on and a similar race has been held each year since, with the exception of one year during the war.

In 1909 Mr. Edenburn became associated with the A. A. A. and has held some kind of an official and important position with them since that date. For some time he has been the highest ranking officer representing the Contest Board and thus the Court of last resort in all important automobile contests.

Those who have attended motor car races at Indianapolis know that Eddie does not hold an honorary position. He is active in its highest sense. He is in charge of everything and actually supervises everything leaving little to his subordinates except to enjoy themselves. Not the slightest infraction of the racing rules ever gets by Eddie and the violator always hears from him about it. But on the other hand, Eddie is fair and reasonable in his decisions and drivers and officials alike have learned to love him and respect his instructions.

Indianapolis alone is not the only city which has a call on Eddie. He is to be seen at almost every important auto race in the country. Years ago when the Vanderbilt Cup race was a feature of the year, Eddie was in the limelight also.

In 1913 Eddie became Editor of the American Motorist, an A. A. A. publication issued in Washington, D. C. but moved his office to Detroit in 1914. From this job, he went to the Detroit Tribune, then turning down an offer from the Free Press, he joined the staff of the Detroit News where most of the motor boatmen first knew him.

Detroit first began to become nationally famous in motor boating circles about 1918. The first Miss Detroit won the Gold Cup race at Manhasset Bay in 1915 and the 1916 race was held in Detroit but it was quite a tame event, as Detroit Regattas are now known. They lost the cup and the 1917 race went to Minneapolis. But Detroit came back strong and held the 1918 Regatta. It was during this year that Eddie first broke into the boat racing sport. He occupied a rather unimportant position on the Race Committee but he did his work so well that he was the find of the year. Since that moment when any yacht club has wanted anything in connection with any motor boat regatta handled properly and promptly, they have always sought Eddie Edenburn.

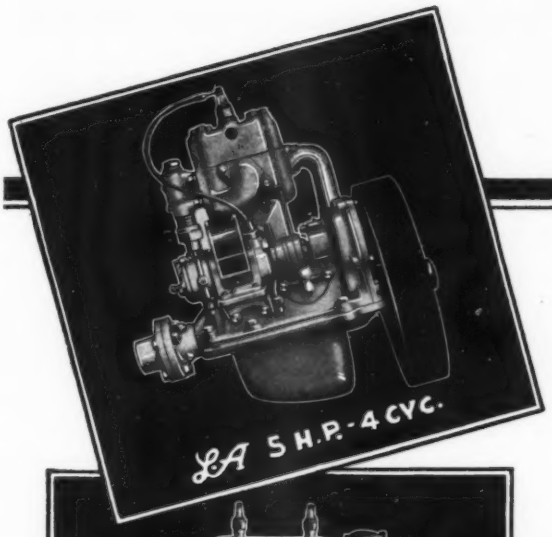
During the next several Gold Cup Regattas, Eddie was the right hand man of the Chairman of the Race Committee at Detroit, Frederick R. Still, now president of the American Power Boat Association and handled most of the detail work for him. In 1923 when Commodore Still moved to New York and was elected president of the American Power Boat Association, Eddie took his place at the helm of everything nautical at Detroit. The 1923 and 1924 Regatta Committees were headed by Eddie and it is highly probable that all regattas for many years to come will be also.

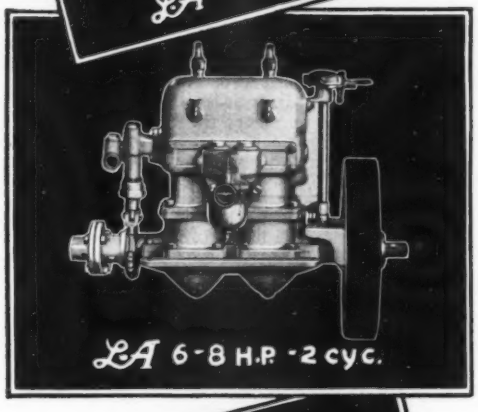
Mr. Edenburns' activities have not been confined solely to racing events and handling publicity. He was one of the prime movers in developing the plans and carrying them to completion for the construction of the one-million-dollar club house of the Detroit Yacht Club. He is editor and publisher of the Main Sheet, the official publication of the Detroit Yacht Club. He took hold of this publication a few years ago after many predecessors had made a failure of the work. At the time Eddie assumed the management of the Main Sheet, it was a publication of only a few pages, issued semi-occasionally. However, the Main Sheet is now one of the leading yacht club publications of the world and comes out regularly the first of every month. It circulates among all the three thousand members of the Detroit Yacht Club, as well as goes to all other yacht clubs in the country.

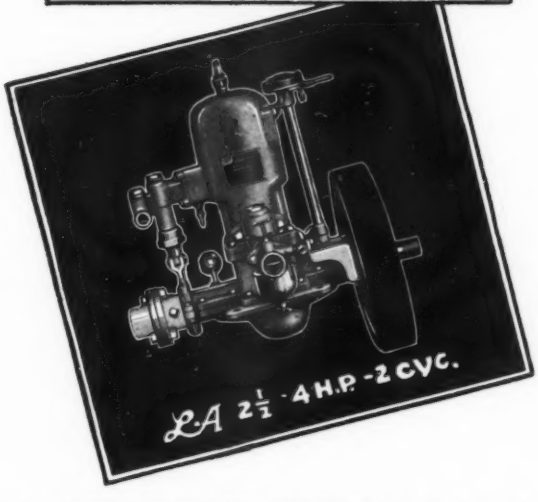
In 1922, Mr. Edenburn was elected secretary of the American Power Boat Association and has held this position ever since. He is also an officer of the Yachtmen's Association of America and of the Barnacles, an organization consisting of members of the Detroit Yacht Club organized to boost and promote everything connected with the yacht club activities.

In business Mr. Edenburn is connected with the Michigan Automobile Dealers' Association and spends much of his time, during the winter months, at Lansing in connection with promoting good legislation.

Advertising Index will be found on page 166







LA Motors lead the field in Sturdiness and Dependability

AGAIN in 1925 the L-A Line is setting the pace—the L-A Twin in the outboard class, and the Model 41, Model 68 and Model 24 in the inboard group. Owners and dealers everywhere report that L-A Motors can't be beaten in their respective fields.

Back of this record of leadership are 22 years of sound engineering and reliable building—22 years during which L-A Motors have been recognized as the utmost in sturdiness and dependability. L-A Motors *make good* because they *are good*—because they are reliable under all conditions—easy to operate—inexpensive to maintain.

The Lockwood-Ash franchise offers real opportunities to wide-awake dealers. Write for complete information.

LA Twin

Lightest outboard motor per horse power on the market. Weighs 52 lbs. complete. Develops full 3 H.P. Has most powerful magneto in outboard field; specially designed float feed carburetor; rope and rudder steering (McNab-Kitchen Manoeuvring rudder as an extra, if desired); indestructible gas tank; under-water parts made of non-corrosive aluminum alloy; quiet exhaust; Alemite lubrication. Automatic Tilting of friction type and patented L-A Slipping Clutch Propeller provide positive protection against damage from under-water obstructions.

L-A MODEL 41 FORD PART ENGINE—Single cyl., 4 cyc., 5 H.P. Motor. Built around Ford sized parts—replacements anywhere. Has Bosch Magneto and Impulse Coupling as standard equipment. Battery ignition in place of magneto, if desired. Many desirable features. Weighs approximately 165 lbs. Detailed information on request.

L-A MODEL 68—6 and 8 H.P. 2 cyl.-2 cyc. Engines 6 H.P. for 15 ft. to 24 ft. craft. 8 H.P. for 20 ft. to 30 ft. craft. Equipped with battery ignition. Bosch Magneto and Impulse Coupling, if desired. Smooth running—easy starting—powerful—silent—clean—pleasing in appearance. Write for complete information.

L-A MODEL 24—2½ and 4 H.P. Single cyl.-2 cyc. Engines, 2½ H.P. for 14 ft. to 18 ft. craft. 4 H.P. for 16 ft. to 20 ft. craft. Equipped with battery ignition. Bosch Magneto and Impulse Coupling, if desired. Simple—sturdy—easy starting—easily maintained. Ideal for inland lakes and rivers. Write for detailed description.

LOCKWOOD-ASH MOTOR COMPANY

516 Jackson Street — Jackson, Michigan

Builders of Marine Engines for 22 years

LOCKWOOD-ASH DISTRIBUTORS

BROOKLYN, N. Y.: Hyde Boat & Engine Co., 55 4th Ave. NEW ORLEANS, LA.: Arthur Duvic's Sons, 122 Chartres St. SEATTLE, WASH.: Pacific Marine Engine Company, 906 Western Ave. NORFOLK, VA.: Mianus Diesel Engine Co., 116 Boush St. NEWPORT, ARK.: Henry M. Owen. FORT WORTH, TEXAS: Veihl-Crawford Hardware Co. JACKSONVILLE, FLA.: Burroughs-McMeekin Co., 30 E. Bay St. TAMPA, FLA.: Knight & Wall Co. MONTREAL, QUE., CAN.: F. I. Mitchell, 633 Notre Dame St. E. ST. LOUIS, MO.: Wm. Grossmann, 1630 Pine St. HARBINGER, N. C.: R. L. Gallop Hdw. Co. PORTLAND, ME.: Mianus Motor Sales Co., 19 Custom House Wharf. LOS ANGELES, CALIF.: V. L. Walker, 601 W. Fairmount St. (Glendale). SAN FRANCISCO, CALIF.: Hart L. Weaver, Bush & Van Ness Sts. FACTORY REPRESENTATIVE FOR PACIFIC COAST: Gordon Snedekor, 1217 J St., Sacramento, Calif. FOREIGN EXPORT OFFICE: 116 Broad St., New York, N. Y., Harold Fee, Mgr.

Huck Says—I Explains Why I Gives Up Yachting

(*Continued from page* 17)

slicker, give me a glass of water and here is five dollars what you can go out and buy yourself a bicycle."

After that he leads me into another place, and they has a lot to drink there, all right, and after awhile he allows as how he is going to go back and bust up the other feller, and I figures that this, it is a good time to duck, which I done, and I doesn't see nothing of Tom for a coupla weeks, for which I is duly grateful, when one night he comes around again and he has a case of licker with him, and I says, "No, I doesn't want it; that I doesn't think it proper to break the law, and besides I might get caught, and besides if I has so much licker on hand at one time, I might get myself into a bad habit, I might.' But he was obderate and says as how if I doesn't want it, I knows what I can do with it, and with that he puts it down cabin and sits down and says, "Huck, I gets kicked out of the Coast Guard. . . . You knows I was a square guy. I stops every rum runner what runs me down, and I doesn't lift off no more than a dozen cases each time for my own use, I doesn't, because you knows they doesn't run you down very often, they doesn't, they usually steers around you, they does, and therefore, you sees, Huck, the supply, it is unreliable, and I says a bird in the hands gathers no moss, but the Captain, he doesn't appreciate me nohow, so I gets canned. Ain't it a shame. Because I has gone into partnership with the biggest bootlegger in the place, and I has made a coupla successful trips already and I is going to make a barrel of money." I tells him I is sorry to hear it because I fears that somethin it may happen to such a nice feller.

Now, Chap, isn't it funny that I happens to think that, because in a few days they was a awful storm out in the Gulf Stream and I hears through a roundabout channel that Tom, he starts across that night and they never hears of him again, even though the bootleggers sent out a airplane to scout all around for him, and you see it is for this reason that I can tell about all that happened.

So I has twelve good bottles and true of Scotch aboard, and I has the same problem I has with the Benedictine, only twelve times as worse. While I was thinking over what to do with them, I starts up the coast for Jacksonville. We has a terrible trip, as usual. The keel it drags for two hundred and fifty miles in the sand where they is supposed to be four feet and they is only about three. All this time, the licker, it rests down in the cabin and I is worried to death. I wants to throw it overboard, but I always recalls that it is against the law to throw anything overboard in the canal, so no matter what I does, I is wrong, and so it goes.

When we gets nearly up the State and was going through the Pablo Canal, we catches up to a enormous houseboat what was called the Dumtoo. We trails her for ten miles, bumping the bottom all the way, and then I says to my crew and guests, I guess we passes her if we has to go cross-country to do it, and I blows two blasts on my horn, which according to your book on navigation, Chap, it means you hopes to go one side or the other, I forgets which, but anyways she blows two blasts back, which I thinks means that they is either willing that we should go by or not, I forgets which, but we decides we goes on her port, which we done.

Just as I thinks I am clear of her, I hears women's screams and men's roars, and I glances back, and that squarehead captain of the Dumtoo, he has turned his wheel hard left rudder, and before you can say, "I gotta go, begosh, goodbye, Burgoyne," her bow, it crashes us just aft of amidships and one of them cute little stockless anchors what was sticking right out of a hawes-pipe, it hooks into our rail and it snaps them cast bronze stanchions off, one after another, all the way to the stern, and busts off our radio spars, just like as if they was toothpicks, and that, it shoves our stern around and both boats, they crashes the bank at once. "Now," says one of the female guests, tactful-like, "listen to him blow up!"—meaning me. So I steps aft and I says to the squarehead skipper, "Now, my good sir, if you will be kind enough to back up a bit so I extricates myself from this here parking place, I will be much obliged," which he done, and we goes on, leaving him some busted stanchions hanging on the fluke of his anchor as a sample. Of course, I intends to sue him, when I gets around to it, for cruel and abusive treatment, but that, it is another story.

A hour or so later we enters the St. Johns River and gets half way up that there beautiful stream, when low and behold what does you suppose we sees coming, Chap? You guesses right the first time, you does. A Coast Guard boat! Sacre Tonneaur! we are undone, once more using French, to show that my stories, they is high class. They was only one thing to do and I done it quick-like. I dashes below, and when I says dashes, I means dashes, because I leaves the port sleeve of my new sport coat on the companionway hinge, I does. Well, anyways, I opens a port light in such a manner that I takes all the skin on the second knuckle of my thumb, and one by one I slips them bottles through it and hears them go "G'blung" as they lands where all good yachtsmen's bottles lands, but not usually full. I again climbs on deck, ready to meet the Coast Guard proper-like and righteous, like any good citizen should, and just then the boat, it gets right alongside of us, and not until then does I note that it is one of them new ones, what they is building for the Government at Jacksonville, and she was only out on a trial trip with a couple of mechanics aboard, and all I has to add is: "Sick transit gloria Monday," which, if they is any rough necks what reads your magazine and doesn't know their Latin, it is what Ceasar exclaims when Brutus makes a pass at him with the knife, and means, "Can you beat it!"

Yard and Shop

(*Continued from page* 90)

Outboard Motor Boat Race at Palm Beach

A five-mile race between outboard motored boats proved a high point of interest at the Palm Beach Regatta. Three races were run—one each for canoes, rowboats and for sea sleds, a timed race.

Meraco Speedster, owned by A. R. Knauer of Chicago, won the Johnson Motor Company Trophy for the canoe race. The boat, powered by a Johnson motor, did the course in 38 minutes, 30 seconds.

Baby Venture, owned by Keith Ferrell of Palm Beach, won the B. D. Cole Trophy for rowboats. His time was 49 minutes, 6 seconds, also with a Johnson motor.

Sherrick Hiscock made the best time in the sea sled event, a Johnson motor enabling him to do the course in 48 minutes, 38 seconds.

The Last Cruise of the Shanghai

Being the story of the Teakwood Boat over the Viking Trail. By F. De Witt Wells, author of The Man in Court.

The stirring account of the voyage of the smallest boat ever to make the trip over the route followed by Lief Ericson in the eleventh century. Judge Wells bought the Shanghai in Copenhagen from the three Danes who, after building her in China, had sailed her all the way home. The boat was a ketch, only 47 feet over all, constructed throughout of teakwood after the design of Norwegian life saving boats.

With Chanler Chapman, a cousin, Judge Wells sailed with her to Bergen, where they were joined by his son, Jay Wells. After provisioning the boat, the three Americans, with two sailors they had employed, set out over the Viking trail for the Faeroe Islands, Iceland, Greenland, Labrador, Halifax and New York. After interesting experiences in the Faeroes, in Iceland, and among the Esquimaux in Greenland, they arrived safely at Dr. Grenfell's mission, Battle Harbor, Labrador.

Engine trouble delayed them in Newfoundland and was largely responsible for their inability to weather the hurricane of August 26, 1924. With Halifax not many hours away and the trans-Atlantic voyage safely behind, the Shanghai was blown in to shore and wrecked on the rocks near Canso, Nova Scotia. By a series of miracles and by extraordinary heroism on the part of Ask Bryndelson, one of their sailors, all lives were saved.

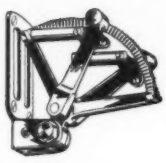
This story of adventure seems out of another and more robust period; it should be welcomed as a modern saga of the sea. The book is illustrated with drawings by Philip Kappel and published by Minton, Balch & Co., New York, and sells for $2.50.

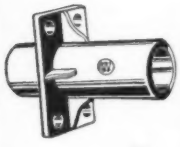
A Southern Distributor for Universals

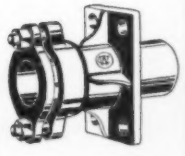
The Alker-Donovan Company, 510 Canal Street, New Orleans, La., one of the oldest and best known distributors on the Gulf, have taken on the distribution of the new Universal Flexifour engine and will carry a complete stock of motors and parts in New Orleans. They are planning to enlarge their Service Department so that they can give prompt service to all Universal owners.

(*Continued on page* 114)

TRADE MARK







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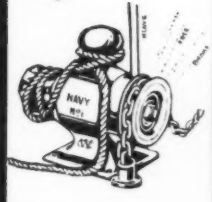
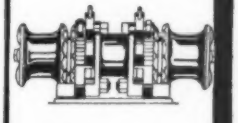
When you're looking for good boat fittings lay a straight course for the WC Trade Mark, and you will land safely in the harbor of Satisfaction.

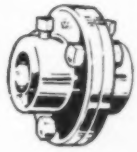
WC OIL COMPASS

One of the 1001 WC Products

Built to withstand the jars of power craft, sensitive and accurate under all conditions. Carefully tested and fully guaranteed. Sizes of dials: 2, 2½, 3, 4 and 5 inch. If not at your dealer's, write us and we will give you the name of a WC dealer. Also ask us for a copy of our Free Booklet; "Compass Talks and Tests"; or send 20c in stamps and we will inclose with the booklet a handy celluloid Course Protractor.







Get This Book of Helpful Hints for Boat Owners

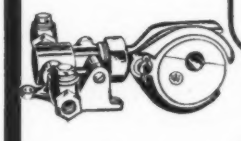
"Sea Craft Suggestions and Supplies" solves those daily "puzzlers" that few know how to handle. Tells how to Box the Compass; what is Proper Ground Tackle; gives hints on Steering Gear, etc.; describes WC Dependable Marine Hardware; tells uses. Compiled from 75 years' experience in making marine fittings. 50c prepaid.

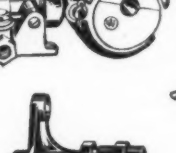
WILCOX, CRITTENDEN & CO., Inc.

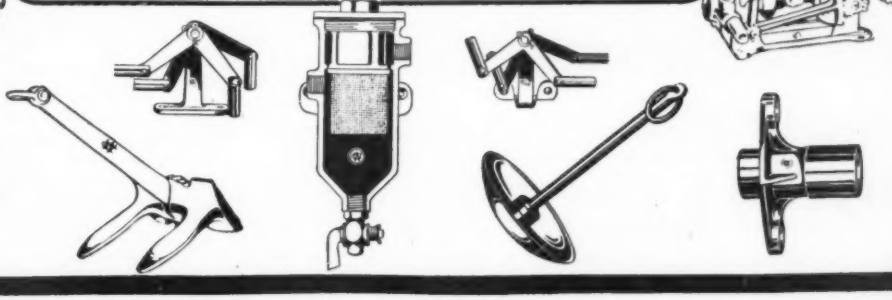
(Est. 1847)

4 South Main Street, Middletown, Conn.

World's Largest Manufacturers of Marine Hardware





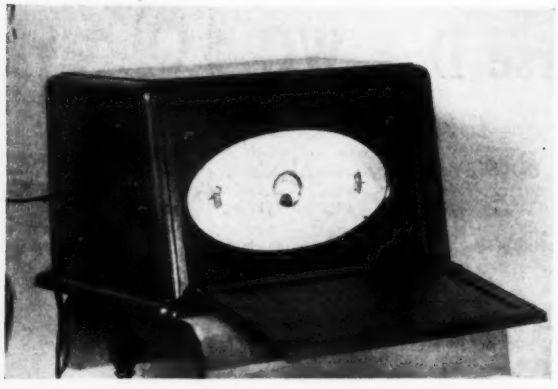


YARD *and* SHOP

(*Continued from page* 112)

A Sea-Going Radio Set

The growing popularity of radio, particularly that form of the art which takes advantage of the varied forms of entertainment being broadcast throughout the country, is bound to appeal to the yachtsman during the months of the year when he enjoys his boat. It is perfectly natural that the yachtsman who becomes accustomed to entertainment daily by radio will want to continue receiving his favorite programs on the boat. Recognizing the fact that the ordinary type radio receiver as installed in the home is not well suited to the extreme and varied conditions to be found on yachts, the Malone-Lemmon Corporation of Plainfield, N. J., has undertaken a very thorough study of the problem, and as a result has developed a special form of receiver which is vastly superior and suitable for boat use. This new set is enclosed in a waterproof cabinet, which is built in a thoroughly shipshape manner to exclude, not only moisture and fog, but all of the other destructive agencies which appear on boats. In fact, the set is so constructed that a stream of water can be played against it without interfering with its operation. The cables connecting the batteries with the set are absolutely watertight and enter through watertight connectors. The use of an aerial on small boats has always been a difficult problem, due to the limited length available on smaller boats. This set has been particularly arranged to overcome this difficulty and will operate very satisfactorily with a very short wire. It is designed also with rubber shock absorbers, which take care of all vibration and jars, which might injure the sensitive tubes.



The new Malone-Lemmon marine radio receiving set

Due to the radical differences in installation required for a set of this type, as compared to the ordinary domestic machines, the Malone-Lemmon Company is arranging to distribute this new set exclusively through established marine channels. Boat builders and other reputable marine distributors can secure a desirable franchise for these sets by getting in touch with the Malone-Lemmon Products, Inc., at Plainfield, N. J.

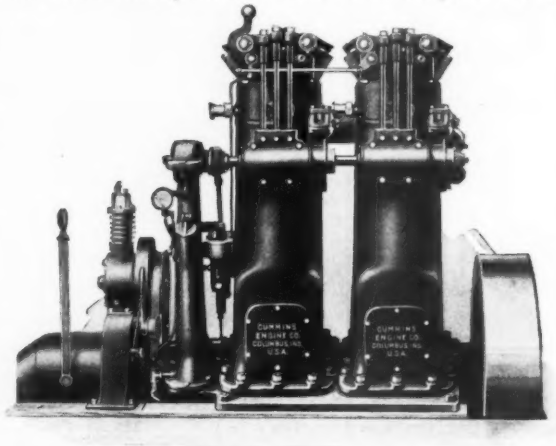
A roomy day cruiser built for Mr. Vauhn of New Orleans, and powered with two six-cylinder Type R Buffalo engines, which drive her 38 m. p. h.

Sea Villa Cruising from Milwaukee to Buffalo

Under the guidance of C. J. Lewis, the Buffalo representative of the Great Lakes Boat Building Corporation, one of the 36-foot standardized cruisers called Sea-Villa is cruising leisurely from Milwaukee to Buffalo with many stops at intermediate points to permit the boat to be seen and inspected by the yachtsmen of the Lakes. Mr. Lewis will be assisted by other well known yachtsmen, a group of whom will meet the boat at Detroit, and ride from there to Cleveland. Another group will ride from Cleveland to Erie, and still another from Erie to Buffalo. It will be a splendid experience for all on board, and a wonderful cruise for those who will be fortunate enough to participate. General invitations will be issued by mail and radio of the arrangements being followed, so that interested people from the several ports at which the boat may go will be enabled to examine it carefully. It is planned to have the boat remain at Buffalo for several weeks after it reaches there, and undoubtedly when this appears in print the boat will be in Buffalo.

The Cummins Oil Engine

An oil injection principle which is entirely new is being used by the Cummins Engine Company of Columbus, Indiana, to provide the fuel for their new heavy duty oil engine, and secure the utmost in efficiency and economy. The fuel in these engines is converted into a fast burning gas by a method similar to the cracking process used in oil refining. The principle as used in this engine has been modified as is necessary to adapt it to the purposes of an engine. It was necessary to find a method by which the fuel could be broken up or cracked into a gas, which on the introduction into the heated air in the combustion chamber, would burn rapidly, but not too rapidly, so that the pressure would not become abnormal. The efficiency of an engine is based on the degree to which the fuel is broken up or gasified. In these engines the oil burns so rapidly that it has been found practical to secure twice the power out of a given engine than is possible with similar engines of other types. While these engines are not rated at twice the usual power, they do give their rated power at less cost and weight than other engines, because of the saving in weight. Due to the excellent control in the new injection method, the new Cummins engine is extremely flexible. It will turn over as slowly as the flywheel will carry it over compression for indefinite periods without missing an explosion.



The Cummins oil engine operates on any free flowing oil with a fuel pressure of only 20 to 30 pounds.

The engine is built in one-, two-, three- and four-cylinder units, which develop 12 h.p. per cylinder at speeds of from 500 to 600 revolutions.

Direct Drive Electric Pump

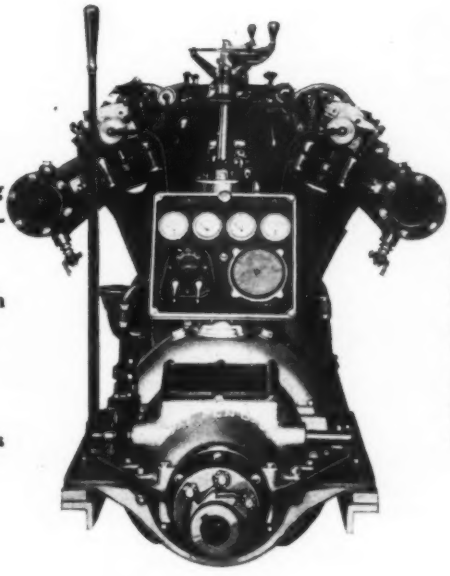
Quite a number of boats manage to leak a little water into their bilges, and it is one of the annoying problems of the crew to get this water back outside the boat where it belongs. In order to help this operation with the least expediture of effort, the M. L. Oberdorfer Brass Company of Syracuse have built a compact little electric motor-driven pump, which is directly connected and of sufficient capacity to pump the bilges, and also be useful for washing down decks and similar purposes. The little Giant has a capacity of 120 gallons per hour, while a Giant size delivers up to 450 gallons per hour. The Junior pump is a smaller outfit for handling more limited quantities of fuel, and has a capacity of 76 gallons per hour. Many other forms and sizes in both power and hand-driven pumps are made, so that any requirement can be taken care of.

JOHNSON MOTOR PRODUCTS INC.

518-522 West 57th Street - - - - - - - - - New York, N. Y.

New Model

Drilled Pistons, with Scraper Ring
New Type Oil Pump, outside adjustment
Tulip Valves
Centrifugal Water Pump, with Bronze Shaft
New Type Heavy Duty Clutch
New Type Starter, 12 volt
New Model Carburetor
Keys on all Ball Bearing Retainers
Delco Generator and Ignition



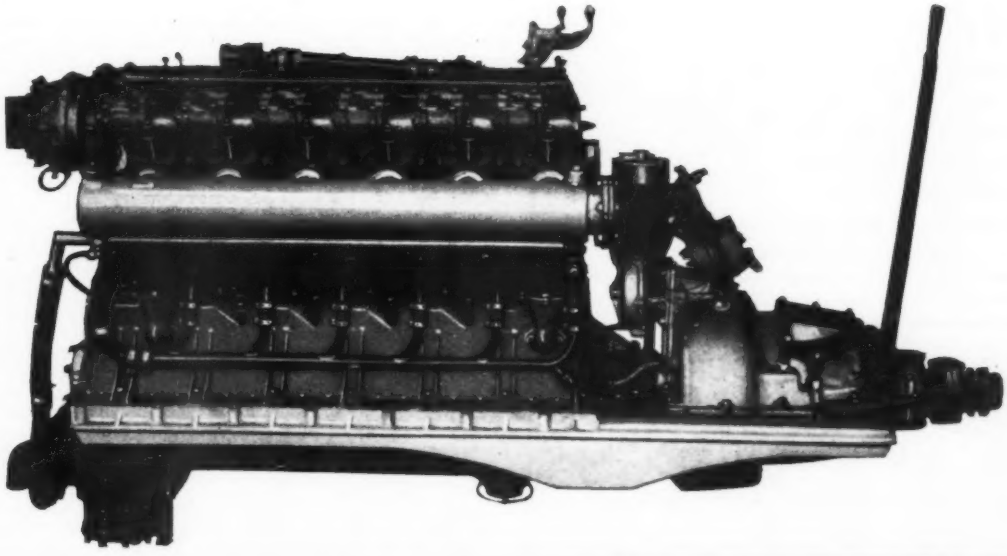
All Enclosed

Ignition Battery, Exide
Instrument Board with Switch and Regulator
Temperature Gauges
Oil Gauge
Air Gauge
Tachometer
Instrument Board Light
Priming Cocks
Controls on Engine

400 / 450 H.P.

The Johnson Marine Liberty is built entirely of guaranteed new and unused parts—assembled, inspected and tested to U. S. Air Service limits in our plant before shipment. Purchasers are invited to send their own inspectors to supervise final tests if desired. Immediate deliveries.

$4250



RECORD 1000 HOURS

Du Brie

The World's Flexible Motor

4 cycle 5 H.P.

All Parts Interchangeable with Ford Parts

WICO Magneto Regular Equipment

$112.50 Complete with Bronze Propeller Wheel

You'll Be Proud of This Motor

IN appearance, operation and price the DuBrie gives you the utmost in marine engine value. While other engines wear out after a few years of service, the DuBrie keeps running on as good as the day it was bought. Has special hot spot manifold. Shipped complete ready to install and run. No extras to buy. *Write today.*

DuBRIE MARINE MOTORS

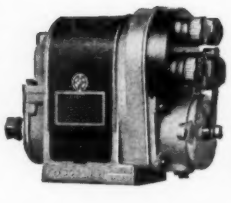
5628 McGRAW AVENUE DETROIT, MICH.

Louisiana Distributors, Stauffer, Eshleman & Co. New Orleans, La.

BOSCH

Trade Mark

This trade mark on a starting, lighting or ignition unit or part stamps it as a genuine Bosch Product—backed by the Bosch guarantee of dependable service.



American Bosch Magneto Corporation
Springfield, Mass., U. S. A.

Brooks KNOCK-DOWN BOAT FRAMES

Save You Two-Thirds the Cost of Any Type Boat

THE Brooks system is the only method of easy boat building. Over 55 designs to select from—CABIN CRUISERS, V-BOTTOM RUNABOUTS, HYDROPLANES, ROW BOATS and SAIL BOATS, all of modern design. Our new 64-page book of designs completely describes each boat and fully explains how easily and quickly it can be built. Send 25c for this book today—don't wait. You can still build a Brooks boat in time to enjoy it this season.

BROOKS BOAT CO., INC., Dept. 33, Saginaw, Mich.

Originators of the pattern and KNOCK-DOWN system of Boat Building

A Boys' Story of Engines

(*Continued from page* 26)

ignition apparatus, which fires the explosive charge, and the timing gear, which times the moment of the explosion. The carbureter may be replaced by a mixer or vaporizer which is a simplified and less efficient device for mixing the fuel with the air.

Perhaps the simplest type of two-cycle engine is the two-port, which has two ports or gates for the admission and escape of gases. With this type of engine the carbureter is bolted over a hole in one side of the crankcase, and is fitted with a check valve which opens automatically by suction but closes under pressure. A coil spring accelerates the closing of the valve. By this means the mixture of gasoline and air is permitted to be drawn into the crankcase and is prevented from being blown out through the same opening.

When the flywheel is turned the crankshaft revolves, and the connecting rod pushes the piston up the cylinder. The piston is fitted with two or more rings set in grooves which press against the wall of the cylinder and make a snug fit. Thus, the piston, rising in the cylinder, acts like a suction pump and draws a charge of vapor through the check valve, which fills the crankcase.

As the flywheel and crankshaft continue to revolve, the piston slides down the cylinder and compresses the gas in the crankcase. If it were not for the check valve the gas would escape at this moment, and the engine would have nothing to feed it.

Finding that it cannot get out by the way it came in, and resenting the pressure of the falling piston, the explosive charge seeks another way out. As the piston comes almost to the bottom of its stroke it uncovers a slot cut in the wall of the cylinder. This slot is one of the two ports which give the engine its name. It is connected with the crankcase by a vertical oblong tube known as a bypass. Through this bypass the gas which has been compressed in the base of the engine rushes around the piston and into the upper part of the cylinder.

The piston, having come to the bottom of its stroke, immediately rises again, closes the slot in the cylinder wall, and further compresses the gas in the cylinder head. This part of the cylinder is called the combustion chamber or firing chamber. It contains about a quarter of the total volume of the cylinder. In other words, if the total volume of the cylinder is 100 cubic inches, about 25 cubic inches of this will comprise the firing chamber. The piston, in rising, comes up to but does not enter the firing chamber.

With the piston raised as high as the connecting rod can push it, and with the gas compressed to a pressure of about 55 pounds to the square inch, the exciting incident in the operation of the engine occurs. The electric spark jumps across its gap at the spark plug in the cylinder head and sets fire to the explosive mixture. The mixture expands as it burns and forces the piston down a hundred times faster than our hands on the flywheel have forced it up. Just before it comes to the bottom of its stroke the piston uncovers the other of the two ports that we have referred to. This is the exhaust port. The burned gases, having done their work, rush out this port, and the piston again rises, compressing a fresh charge of gas which is fired at the top of the stroke.

The first of two questions that you will probably ask yourself at this time is, "Why, if both ports are uncovered by the piston at the bottom of the stroke, doesn't the exhaust gas rush back into the bypass?" The answer is that vapor, like water, always takes the easiest path. The exhaust port opens into the muffler where the pressure is atmospheric. The bypass opens into the crankcase where, as we have already seen, the unburned gas has been highly compressed by the descending piston. Hence, rather than fight against the pressure in the bypass, the exhaust gas seeks the open air.

The other question that you will naturally ask yourself is, "Why doesn't the new gas follow the burned charge through the exhaust port, since both ports are open at the same time, and since vapor takes the easiest path?" The answer here is that it would if it could. However, the builder of a two-cycle motor always places a baffle plate in the head of the piston directly in the path of the incoming vapor. This baffle, or deflector plate as it is sometimes called, throws the inrushing gas upward toward the firing chamber, and by the time it has reached there, the rising piston has closed the exhaust port and cut off its chance of escape.

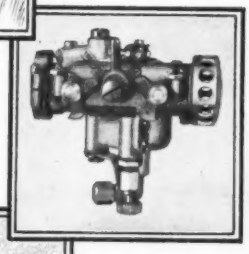
Meanwhile, as the motor continues to run, a fresh charge of gas is sucked into the crankcase whenever the piston rises, is compressed as the piston falls, is forced through the bypass into the cylinder, and is exploded when the piston again comes to the top of its stroke.

There are other types of two-cycle motors which we must examine, but before doing that we may as well clear up a few points that have been allowed to pass unnoticed. One of these

(*Continued on page* 120)

Advertising Index will be found on page 166

Trolling speed—slow enough to sink your bait where you want it. A gait to fit any lure or any day.



Carburetor

Note the three simple settings of valve lever—choking position for instant starting, special trolling position and speeding position.

Racing speed—just the low hum of Evinrude Equa-Power and the miles slip by. What sport!

Slow Trolling to Speeding
—*that's Real Motor Control!*

EVEN the man who leaves the wheel of a Cadillac for the tiller of an Evinrude, gets a real thrill at the amazing flexibility achieved in the new "1925 Champion EVINRUDE Sport Twin." Just name your wanted pleasure! Goin' fishing?....picnicking with your best pal?....or is it a jaunt 'cross the lake for eats for the week? Flip-of-the-finger control gives you unexcelled choice of speed from trolling to racing—all made possible by the following combination of features found *only* in the genuine Evinrude:

1. *Carburetor*—needle valve for perfect adjustment to any weather or climatic condition. Special speeding mixture, special trolling mixture.
2. *Super-Power Magneto*—current powerful enough to jump eight times the standard spark plug gap. Columbia Hot Shot battery-ignition if you wish—and at a lower price.
3. *Equa-Power Motor Construction*—careful, exact balancing of all reciprocating parts in one cylinder against companion parts in the other, produce smooth, vibrationless action.
4. *Power-Focus Drive*—in a water-and-sand-tight housing is sealed the only ball-bearing transmission used in any outboard motor. (See panel at right for further details).

There can only be one genuine "latest model Evinrude", and this is it. More genuine Evinrudes in use than all other makes combined.

Write for the new 1925 "Evinrude Year Book". Mention if interested in our popular plan by which any dealer can arrange easy monthly payments for you on any Evinrude — outboard or inboard.

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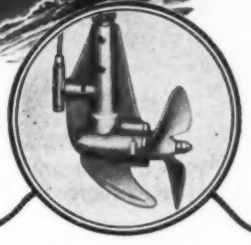
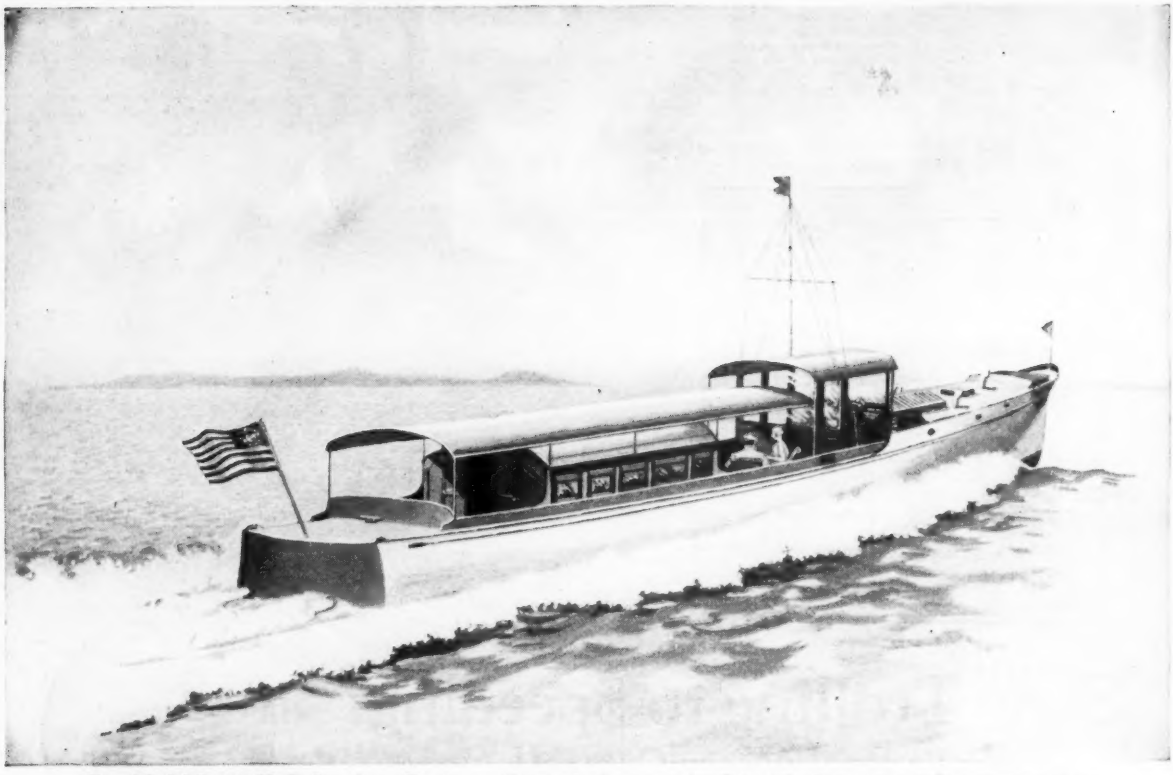


The Famous
EVINRUDE
Power-Focus Drive

JUST one of ten "1925 Champion EVINRUDE Sport Twin" features. Note that gear housing is of the rudder-type, giving steering surface without excessive weight. Cast of manganese aluminum which is both extremely tough and light.

This encases the only ball bearing transmission used in any outboard motor. Ball bearings reduce friction tremendously, which means that the motor's eager power is applied with maximum efficiency at the propeller blades—*where power really counts!*

The New 1925 Champion EVINRUDE Sport Twin

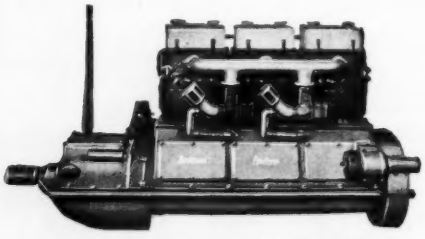


Two Model R 300 H. P. Speedway Engines will provide the power for this 61 ft. Commuter under construction at Nevis Yard for Mr. Otto H. Kahn from designs of Tams & King. A speed of 30 miles per hour is anticipated.

Speedway Engines

are recognized as the most effective guarantee of satisfactory performance in pleasure boats

IT IS A MATTER of more than merely historical interest to recall that the first engine (other than steam) ever constructed for marine use was the naptha engine designed and produced by the parent company of the present Speedway motors. One of these quaint little naptha launches, which years ago revolutionized the art of pleasure boating, is still on exhibit in the Consolidated Yards.



Speedway Engine Model MR

This engine develops 180 H. P., with 5¾-inch bore by 7-inch stroke. Speedway MR-6 is built in two types—medium duty and high speed; the latter type used exclusively in the U. S. Coast Guard Picket Boats.

"Speedway for Permanence"

This tremendous initial advantage in the way of production equipment and engineering skill has been retained ever since by the builders of Speedway Engines in the important field upon which their energies have been concentrated.

The ideal so long identified with the name Speedway consists in producing engines for the very finest class of pleasure boats, cruisers and yachts combining true stability and permanence along with all the comforts and conveniences at

Advertising Index will be found on page 166

the command of the modern naval architect and builder.

The result of this ideal is that a Speedway engine gives the owner an amazing length of service plus a performance characterized by smooth, quiet operation and a most gratifying freedom from trouble and care.

A Speedway for Every Class of Boat

From Playboats and small Day Cruisers of some 30-foot length up to the larger off-shore Cruisers and Yachts, the Speedway line includes a model perfectly adapted to every weight of hull, and some of the most successful and best known boats in each length have been Speedway powered.

Scrupulously avoiding those spectacular features which sacrifice year-in, year-out permanence to the desire for excessive speed, Speedway engines not only give boats a wider range of dependable usefulness, but also a larger value in the event of resale.

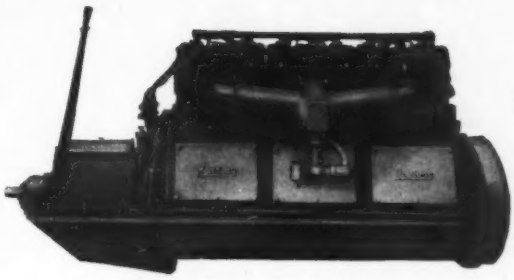
The Speedway Sales Department is prepared to render expert advice in the selection of the most suitable engine installation for new or used boats. Some of the most enthusiastic Speedway owners are those who have had opportunity to compare Speedway performance with that of one or more other engines in the same hull.

We will be pleased to send on request a bulletin illustrating and describing the various Speedway models and also a folder showing a few recent Speedway installations

CONSOLIDATED SHIPBUILDING CORP.
MORRIS HEIGHTS **NEW YORK CITY**

Speedway Engine Sales Department

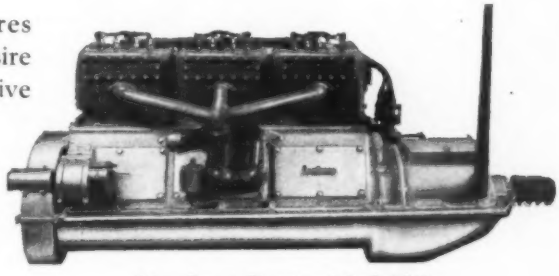
A. G. GRIESE, Inc., 331 Madison Ave., New York City



Speedway Engine Model P

This model is an ideal engine for the heavier cruiser-type boat where medium duty is required—for example, Mr. E. C. Crossett's 80-foot "Betty R."

Speedway Model P develops 115 H. P. with 6¼-inch bore by 8½-inch stroke.



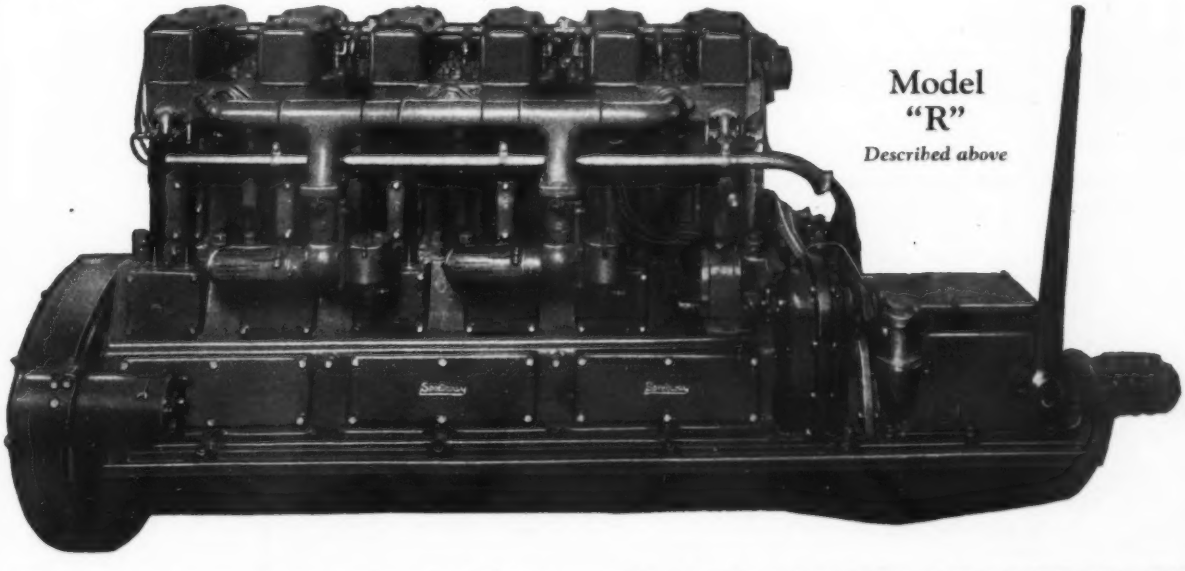
Speedway Engine Model M

Developing 150 H. P., with 5¾-inch bore by 7-inch stroke, Model M Speedway is a medium duty engine filling an important class of requirements.

Its recent installation as auxiliary power in the well-known schooner "Wildfire" of Mr. Charles L. Harding is an excellent illustration of the dependability of this engine.

Speedway Engine Model R

Model R, developing 300 H. P., with 7-inch bore by 8½-inch stroke, has powered some of the finest express cruisers and commuters launched during recent years—a typical recent example being Mr. Otto H. Kahn's Commuter shown on facing page.



Model "R"

Described above

Gray MOTORS $99 Up

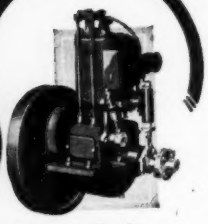
For Fishing Boats, Work Boats, Trollers. Up to 8 H.P

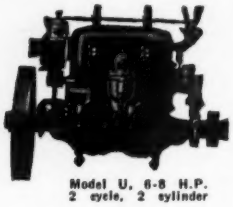
Immediate Shipment This Month

Get your Gray motor early so you can enjoy a full season of thrilling pleasure. When you buy a Gray you get the benefit of thirty years' marine engine building; known and used all over the world. This year they are better than ever; smoother running, easier starting, no back firing, longer lasting and cost less to operate than others.

Gray Model U, 6-8 H.P. Over 13,000 Model U Grays are in service today. As simple and trouble-proof as the best engineering practice makes possible. Only three moving parts—piston, connecting rod and crank-shaft. You could not get a better engine of its size at treble the price.

You Cannot Equal These Values





Model U, 6-8 H.P. 2 cycle, 2 cylinder

Model O, 4 Cycle

New this year, the greatest one cyl. four cycle engine ever produced, an unqualified success. We could market this engine at a much higher figure and make big profits—but that is not the Gray policy. We want to give the world the greatest treat in engine value and the Model "O" is the treat of all treats. Like the famous Model "V" Gray, it has overhead valves and for its bore and stroke, 3¾" x 4½" it produces the greatest power for fuel consumed of any engine in its class. Oversize construction thruout. Schebler carburetor with hot air connection to exhaust. Bosch magneto extra, water pump is very large and keeps engine cool when trolling as low as 125 R.P.M.

Quick Delivery Guaranteed

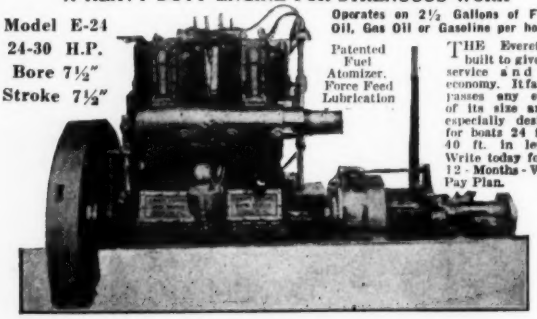
Write for details today SURE

GrayMarine Motor Co. 6910 Lafayette Avenue, East **Detroit, Mich., U.S.A**

GET THE FACTS ABOUT THE EVERETT

A HEAVY DUTY ENGINE FOR STRENUOUS WORK

Model E-24
24-30 H.P.
Bore 7½"
Stroke 7½"



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Patented Fuel Atomizer, Force Feed Lubrication

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We have Liberty and Curtiss Manifolds made up. Intake or exhaust manifolds for other motors built to your specifications or drawings. We are equipped to produce special copper work of any kind, COPPER TANKS, any size or shape.

Write today for prices or estimates

MIAMI COPPER CO. **MIAMI, FLA.**

A Boys' Story of Engines

(*Continued from page* 116)

is the method of changing the straight up and down motion of the piston into the rotary motion of the crankshaft. Rather than define this process in technical terms, I shall refer you once more to a locomotive.

You have seen in every steam locomotive how a piston rod comes out of the cylinder at the forward end of the engine and connects to an arm which is attached at its opposite end to the driving wheel. This arm is connected off center, perhaps a third of the way between the hub and the rim of the wheel. As the engine starts, the wheel seems to pull the rear end of the connecting arm down around its circumference, back until the arm is horizontal, up as far as it will go, and then forward until it is again horizontal. Meanwhile the piston rod has come out of the cylinder and gone back in again. Actually the arm has pushed the wheel, although it has looked as if the wheel were pulling the arm.

With this picture of a locomotive in mind, we can return to the gasoline engine, where a similar action occurs. The arm of the crankshaft takes the place of one of the driving wheels of the locomotive, and one end of the connecting rod rides around the circle of the crank arm just as the steam engine's connecting rod rides around the wheel. But with the gas engine the piston rod is omitted, and the connecting rod attaches directly to the piston. This attachment is made by means of a wrist pin or pinion, which oscillates or moves to right and left in its bearing as the other end of the connecting rod follows the path of the flying crankarm.

Another necessary difference between steam and gas engine practice is in the method of linking the lower or big end of the connecting rod to the crankarm. You have noticed that the connecting rod of the locomotive is attached to a big stud that juts out from the side of the wheel, permitting the wheel to make a complete revolution without colliding with the rod. But in the gas engine collision is avoided by making the crank-arm in the form of a U, between the arms of which the connecting rod passes as it reaches bottom dead center.

Another important function of the internal combustion engine is the flywheel, whose function should be understood before we go farther. We have spoken of turning the flywheel to move the piston up and down and start the motor. In operation, of course, the moving piston turns the flywheel. Now the flywheel, being heavy, is hard to set in motion; and, like a football halfback, once it is in motion it is not easily stopped.

This is fortunate, because the piston, having been forced down by the burning gases, doesn't feel any too keen about compressing a fresh charge of gas and being pushed down again. If it didn't have a flywheel to urge it on, the piston at the end of an explosion stroke would come half way up against pressure, back down, and stop at bottom dead center.

But the flywheel, which stores up power as it gathers speed, pushes the piston through its compression stroke and brings it into position for another combustion stroke. The piston, being human (if you don't think a gasoline engine is human, you must try living with one for a few weeks) pushes the flywheel again when it receives the strength of the next explosion. Between the ill-natured pushes of piston and flywheel the work of the engine is continued.

A forceful example of the work of the flywheel is seen in the operation of a farm engine of the hit-and-miss type. (If you are city-bred you will see the same example in the thunderous gasoline air compressors that are used in excavating for skyscrapers.) In either case you have a machine that is required to work hard part of the time and loaf part of the time. In this respect stationary engines are different from marine engines, which, like sailors, have to work hard all the time.

For the sake of fuel economy, when the hit-and-miss engine reaches a certain speed a governor automatically cuts out the spark or opens a valve, and the engine ceases to work. However, the flywheels (there are two with this kind of motor) are so heavy that the engine continues to run under its own momentum. Finally, as the flywheels expend their stored up power and the engine slows down, the governor cuts into the spark or closes the valve, and you hear the exhaust popping away like a gatling gun until top speed is again reached. If it were not for the reserved power in the spinning flywheels, the engine would stop the instant the spark was cut out.

THREE-PORT, TWO-CYCLE MOTORS

One of the principal reasons for constructing two-cycle engines is that they are valveless, and hence less liable to give trouble than motors that are equipped with valves. But we have seen that the two-port two-cycle has a check valve in its base. This being the case, you can hardly call it a valveless motor.

Consequently the three-port two-cycle was designed to avoid

(*Continued on page* 124)

What do you Value Most in a Motor?

Is it dependability?

Kermath has staying qualities which are found in no other motor. For years thousands of Kermaths have been giving dependable service to all kinds of owners—in all kinds of boats—in all kinds of waters.

Is it economy?

Our file holds thousands of unsolicited letters telling us of unheard of and unusual Kermath economy.

Is it design?

Kermath is known the world over for its simplicity of design —fine watch-like construction—advanced mechanical features and all around efficiency.

Is it price?

On that score, Kermath leads the world. When the size of motor is considered, plus the super-abundance of workable power and remarkable gas and oil economy, the Kermath is the most attractively priced power plant on the market.

Write for more details. There is a Kermath for every size of boat.

3 H.P. to 100 H.P.
$135 to $1450

"A Kermath Always Runs"

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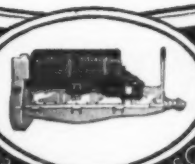
KERMATH
BOAT ENGINES



QUALITY
Piston Rings

Quality Piston Rings, because of their accuracy, lasting resiliency and long life, are the logical first choice for installation in marine engines.

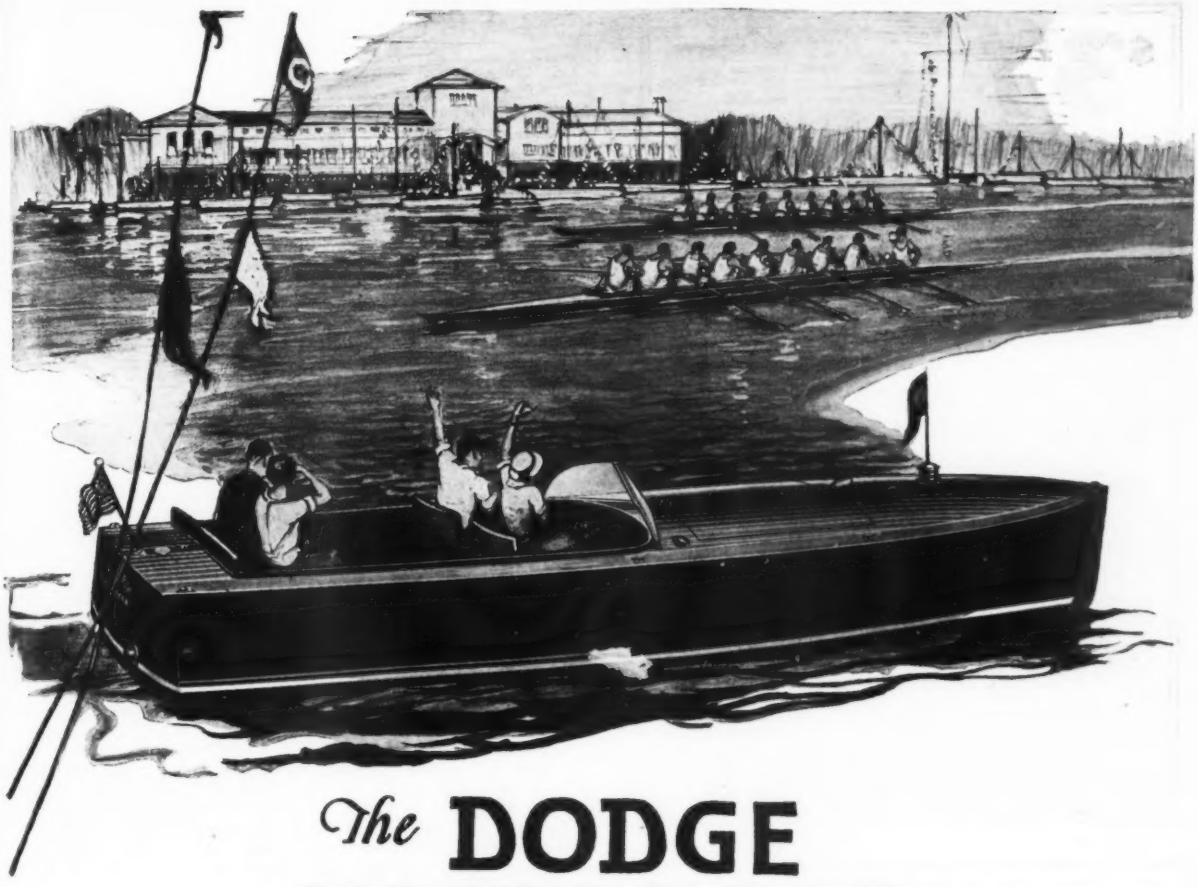
Of no other type of engine is such unfailing dependability required or expected.

For speed, for power or for the emergency -- Quality Piston Rings will insure the full compression that means maximum engine efficiency under all conditions.

The Piston Ring Company

Muskegon, Michigan

Advertising Index will be found on page 166



The DODGE WATERCAR

You'll envy the fellow behind the wheel of a Watercar!

The smooth and graceful gliding over playful whitecaps—

The rhythmic song of the powerful motor—

The gleam of fine mahogany in the summer sun—

You'll envy him—until you own a Watercar yourself!

Write us, or consult your Dodge Brothers dealer.

HORACE E. DODGE BOAT WORKS
INCORPORATED
DETROIT, U.S.A.

$37

Puts This Motor on Your Boat

Only $37.00—then no more rowing—no more blistered hands and aching muscles. Our

"Pay as You Play"

plan makes it easy to take care of the balance. Covers any Caille motor. Ask your dealer or write us for details.

The only motor that gives you big launch control of your rowboat

CAILLE DETROIT 5 Speed Twin

Speed changes made mechanically and positively by raising or lowering steering handle in ratchet. Provides high speed forward, trolling speed, fast reverse, slow reverse and neutral. When set at neutral, motor runs while boat stands still. Exclusive Caille feature.

Other Features

Twin cylinders—no vibration. Light weight. Zenith carburetor. Eisemann magneto. Motor tilts over obstructions. Rope starter. Beautiful finish. Fully guaranteed. Send for details—now.

THE CAILLE PERFECTION MOTOR CO.
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GASOLINE OR FUEL OIL FILTER

IN BRASS	
No. 125	⅛....$5.00
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Eliminates danger of back-fires due to water or dirt in fuel.

Eliminates fuel stoppage at sea

DUTCH WEAVE MESH BASKET.

FURNISHED IN ANY MESH DESIRED

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6 Volt
12 Volt
32 Volt
110 Volt

HIGH EFFICIENCY SEARCH-LIGHTS

Arc or Incandescent

Here's a light that floods your course with the brilliance of the sun. Brings out objects as clear as you would see them by day.

These searchlights, manufactured of non-corrosive materials, not only make for safety, but also add snap to the appearance of any boat.

STURDY BRONZE FITTINGS
SPECIAL GLASS MIRROR REFLECTOR
Size: 7" to 60" in diameter.

6, 12, 32 Volt Incandescent Searchlights.
110 Volt Arc or Incandescent Searchlights.

Illustrated literature sent promptly upon request to

THE CARLISLE & FINCH CO.
261 East Clifton Avenue Cincinnati, Ohio

A Boys' Story of Engines

(Continued from page 120)

this difficulty—and if you ever sit in at a gathering of fishermen you will probably hear some vehement discussion about the superiority of one type or the other.

The three-port motor is identical in operation with the two-port, except that a third port in the cylinder wall does the work of the check valve in the base. This third port (to which the carbureter is affixed) is cut in the cylinder wall at a point that is uncovered by the piston when the piston has risen to the top of the stroke, but is closed by the piston during the rest of its cycle. This port, remember, is uncovered by the bottom of the piston, whereas the two other ports are uncovered by the top of it. When, therefore, the piston rises rapidly in the cylinder it creates a partial vacuum in the crankcase. When the third port is uncovered the vacuum sucks in the gaseous mixture from the carbureter. Once inside the crankcase, the mixture is compressed by the downward travel of the piston and forced into the cylinder through the bypass exactly as we have described before.

A variation from this type of three-port motor is sometimes given by bypassing the fresh mixture *through* the piston instead of around it. To understand this process we must bear in mind the fact that a piston is shaped like an inverted coffee can. The upper part is solid, the walls are thin, and the lower part is open. In order to permit the transfer of the vapor from the crankcase to the cylinder, a horizontal slot is cut in the side of the piston. Then, instead of having the lower end of the bypass permanently open in the crankcase, the bypass both starts and ends in the cylinder wall, and hence is completely closed at times by the piston. But when the piston comes to the bottom of its stroke, the slot in its wall lines up with the lower end of the bypass and gives the vapor a clear path to the cylinder.

An advantage claimed for this arrangement is that the admission of fresh gas to the cylinder is so accurately timed that there can be no possibility of the new charge being fired by the ragged end of the old one.

Still another type of the two-cycle engine is known as the two-three-port, which combines the design of the two-port with that of the three-port. Like the former, it has a check valve between the carbureter and the engine; but this valve instead of being in the base, leads directly into the bypass.

The ascending piston closes the upper end of the bypass and thus allows a charge to be sucked through the carbureter into the base. The pressure created by the descending piston closes the check valve as in the two-port motor, and as the piston comes to bottom dead center it uncovers the cylinder port and permits the compressed mixture to flow back through the bypass and into the cylinder.

An advantage of the two-three-port motor lies in the fact that the incoming gas is warmed by the walls of the bypass and is thus delivered to the firing chamber in a more combustible state. A disadvantage results from the fact that the incoming gases do not travel in an uninterrupted path—that is, in entering they flow down through the bypass, turn about, and then flow up in the opposite direction. It is sometimes claimed, however, that this abrupt change of direction improves the mixture by vaporziing it more thoroughly than the carbureter has done.

If you wish to find out how many ports a two-cycle motor has without asking embarrassing questions, remember that the carbureter is always attached to the base of the two-port motor. Three-port and two-three-port types carry the carbureter on a level with the cylinders.

So far for the sake of simplicity we have described only a single-cylinder engine. The operation of the two-cylinder machine is exactly the same, except that when one piston is down the other is up, or 180 degrees away. Thus the two cylinders fire alternately, and there are two power strokes for every revolution of the crankshaft. There is also a three-cylinder two-cycle engine, wherein the arms of the crankshaft are spaced 120 degrees apart, giving three separate explosions for each revolution. Four-cylinder two-cycles give four power impulses for each revolution, and the crank arms are set 90 degrees apart, thus giving a smoother flow of power than the three.

Twelve or thirteen years ago, in the heyday of the two-cycle motor, there were six-, eight-, nine-, and twelve-cylinder motors on the market. But today we have (unless some of the old ones are still running) only ones, two, and fours, with a small sprinkling of threes.

Today, in fact, 95 per cent. of our marine motors (with the exception of the outboard or portable) are four-cycle machines, and it is time to study the operation of this more efficient type. We shall return again to the two-cycle to take up the matters of ignition, lubrication, cooling, and general maintenance, and also to describe the popular portable.

(To be continued)

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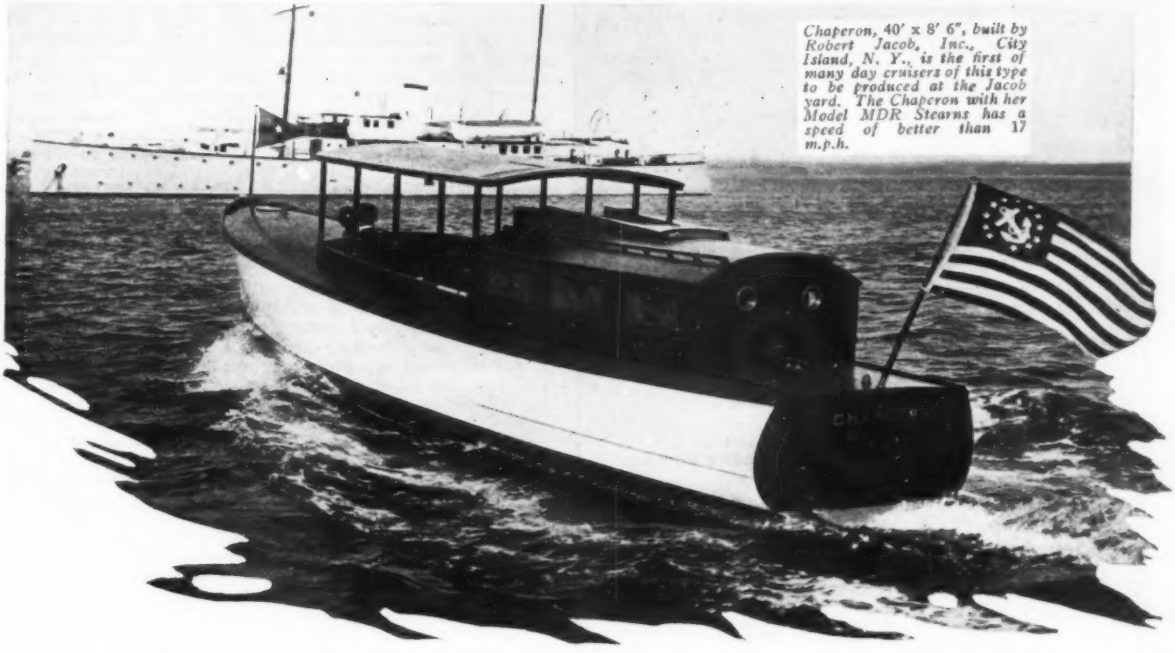
Silky Power — Steady Power — Silent Power Is STEARNS Power



Chaperon, 40' x 8' 6", built by Robert Jacob, Inc., City Island, N. Y., is the first of many day cruisers of this type to be produced at the Jacob yard. The Chaperon with her Model MDR Stearns has a speed of better than 17 m.p.h.

Another Stearns Powered Boat

GLIDING over the silvery waters with the ease of a zephyr, you see a boat, maybe it's a cruiser, runabout or auxiliary, but the happy carefree party aboard, their mirth and exhilarations tell you something your eyes do not see—that it is another Stearns powered boat.

The Stearns Extra Reserve engine adds to the pleasures and zest of boating. Its silky smooth and silent flow of energy makes one forget the engine that is speeding the boat on its way. And more appreciated is the low operating and maintenance cost of a Stearns.

Four Cylinder Models

HIGH SPEED

MHR—4½"x6", 80 H.P., 900 lbs., $1090
MDR—5⅛"x6½", 125 H.P., 1300 lbs., $1550

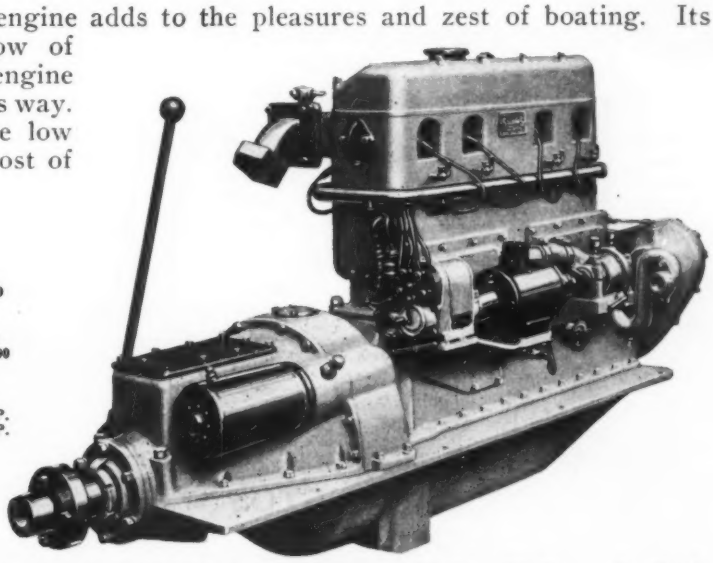
MEDIUM SPEED

MHU—4½"x6", 20-25 H.P., 1050 lbs., $900
MDU—5⅛"x6½", 35-70 H.P., 1750 lbs., $1390

The New STEARNS Six

MDR-6—Bore, 5⅛"; Stroke, 6½"—160 H.P.
MDU-6—Bore, 5⅛"; Stroke, 6½"—100 H.P.
Cylinder Displacement, 805 cu. in.

Write direct to us for particulars as to local Stearns dealer.



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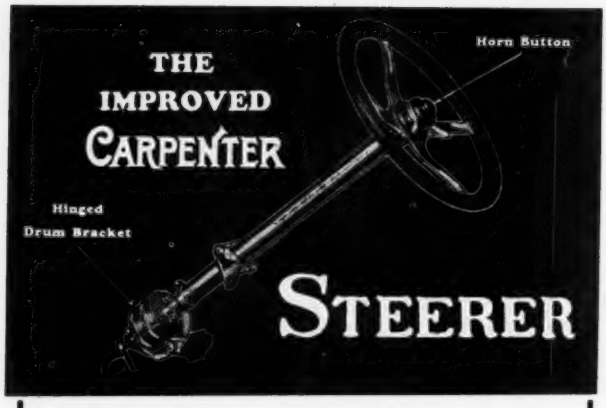


The Most Important Part

of your boat is the STEERER! If it goes wrong nothing else matters.

The Improved Carpenter Steerer leads in strength and rigidity. In addition it has these exclusive features: Press Button for horn in wheel.

Hinged Drum Bracket permitting change of angle of steering gear.

Improved Spark and Throttle Controls.

This is only one of the thousand items we have in stock for the boating man.

Send for descriptive circular and our 1925 Catalog of

MARINE SUPPLIES

Our 85 years' experience is at your service.

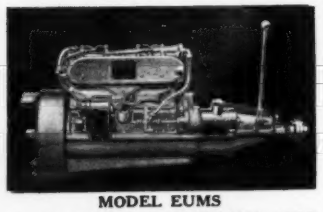
GEO·B·CARPENTER & CO.

200 W. Austin Ave. CHICAGO

CADYFORD

The Engine You Can Afford

Pioneer Marine Engine Manufacturers



Write Stating Your Requirements

Established 1883

MODEL EUMS

C. N. CADY COMPANY, INC.

304-F Centre Street CANASTOTA, N. Y.

Brand New

IMPORTED ROBERT BOSCH ZR-4

TWO SPARK MAGNETOS

Price reduced to $35.00 each. List price over $100.00. We have a small stock remaining on our hands. These instruments are brand new as stated, but are slightly shop worn.

COOK COUNTY SALES COMPANY

2108 WABASH AVENUE, CHICAGO

Among the Glaciers of Alaska

(*Continued from page 29*)

can be found on this earth. It is an uninhabited wilderness of towering snow-clad mountain peaks, virgin forests, boundless muskegs (marshes), and jungles of underbrush such as one expects to find in the tropics. Within a two-hour traveling radius of the camp, chiefly by motor boat, one may find every kind of game commonly known in Alaska—moose, black and brown bears, uncountable deer, caribou, bighorn sheep, white mountain goats, and feathered game galore. Moose hunting had been one of Wiedey's ambitions from boyhood, so on our second day at Twin Glacier Camp, he took Ikigink, Tommy Shorty, one of Dr. DeVighne's Indian guides, and one of my high powered rifles, and set out up the river. In four hours he was back in camp with a fine head, and half a ton of moose meat. I went fishing that day—took Dr. DeVighne's motor boat The Mud Hen, and went down the river into Turner Lake, a fresh water glacier pool that looks like Yosemite Valley with the floor covered with water. The first toss of the fly into the lake, and it was swallowed—seemingly by a bucking horse. Half an hour later, after an indescribably thrilling struggle, I landed a rainbow trout 27 inches long. I caught three more fish of similar size before noon, and then quit fishing because I couldn't imagine any possible use for more than 25 pounds of fish.

That same day Mrs. Gray went moose hunting in the muskeg over across the river. She came back late that evening, scratched, bruised, mosquito bitten, and her clothing in tatters. She told a lurid tale about trying to stalk a moose, and stumbling smack dab upon a huge brown bear. There is no denying that these bears are perhaps the largest and most ferocious animals on earth, and according to Mrs. Gray's story, the bear promptly wheeled around and chased her up the tallest spruce tree she could find in the muskeg. The Colonel looked across the table and winked. Nobody else winked, but the looks of all present signified that the story was accepted with a grain of salt. The following day, however, I went moose hunting in the same area with Taku Jim, one of the Indian guides. Far out in the muskeg we found a huge spruce tree with monstrous bear tracks in the mud all around it. Jim suggested that we better climb the tree, and comb the muskeg with our field glasses. Thereupon I began going up the tree. About twenty feet from the ground, I observed several branches from which the bark had been peeled as if by someone climbing with hob-nailed boots. I climbed for a perpendicular 120 feet, and found the same marks on the branches all the way up. It was impossible to climb higher. I was reaching for my field glasses when I discovered a small scrap of bright scarlet woolen yarn sticking in a mass of resin that oozed from the tree trunk. It was a fragment of the red sweater Mrs. Gray was wearning at the time of her reported encounter with the bear. Jim and I killed no game that day, but at the dinner table in camp that evening I told the story of the spruce tree in the muskeg, with the bear tracks all around it. I told about the marks on the branches, and then as a final summing up before the jury—produced the piece of scarlet yarn found in the tree top. Mrs. Gray's story was verified beyond reasonable doubt. As a reward, I got a third piece of apple pie. I learned later that the brown bears have no friends among the Alaskans. Dr. Sinclair told of at least a dozen men he had known who'd been devoured by them, and of a score of others that he'd tailored and repaired after the bears had left them for dead—surgery that he'd performed while on duty at the Chichigoff Mines. Moreover, at Twin Glacier Camp, men are not permitted to venture off the premises without being heavily armed, and women and children never leave the camp without being accompanied by an armed male escort. These Alaskan bears seem to be incredibly numerous. They attain enormous size—often sixteen hundred to eighteen hundred pounds. They are reputed to be the only animals on the American continent that will attack a human being without the slightest provocation.

After several wonderful days in the Taku River Country, an opportunity presented itself for me to return to Juneau aboard a fast motor boat. I had no purpose in making the trip virtually back to our starting point, except that I was anxious to see the result obtained in the numerous photographic negatives I'd exposed. There, a resident photographer graciously extended me the courtesies of his laboratory. I had photographs of glaciers, icebergs, and what not. Everything came through the hypo about one hundred per cent of anticipations. When the local photographer saw my negatives, he picked out about two dozen of them, and asked if I cared to sell them. I had no desire to sell them, and told him so, but he insisted. Finally he said: "If you will sell me those negatives—name your price, and I'll pay cash." Just why a professional photographer, living within a few miles of scenes that he could very easily go out and photograph for himself, should want to purchase a set of negatives made by one who is an amateur to those local conditions, seemed a puzzle. I

(*Continued on page 128*)

Advertising Index will be found on page 166

Baby Gar

The World's Fastest
Most Reliable
Most Seaworthy
Standardized Runabout

"Baby Cub," a three year old Baby Gar.

OUR thought in racing Baby Gar runabouts is not merely to win the race but to demonstrate as conclusively as possible the consistency, reliability and seaworthiness of these remarkable boats. As an example, during the recent Palm Beach and Miami regattas there were six races in which Baby Gar runabouts were eligible to compete. Every Baby Gar which entered not only finished every race but took first and second place, and also third place when more than two Baby Gars were entered.

In four of these six races, the "Baby Cub" took two firsts and two seconds. This standard Baby Gar runabout has been used for three seasons around New York, Miami, Palm Beach and Havana, and in spite of many thousands of miles of service and many hard races is still as good as new in speed, reliability and appearance.

Baby Cub's regular schedule from New York to New London is 2 hours and 20 minutes for the 100 miles. During the recent Florida season Baby Cub made several runs through the open waters of the ocean between Miami and Palm Beach, making the 72 miles in 1 hour and 30 minutes.

At the Miami Regatta against 17 other entries, this same three-season-old boat took first place in the Free-for-All Race, despite the fact that it carried seven famous Indianapolis Speedway drivers as passengers during the race.

Here's What They Said—

"I have never had such a thrill, although I have been designing, building and racing fast automobiles for twenty-one years."—Louis Chevrolet.

"That ride alone was worth the four day train trip from Los Angeles to Miami."—Tommy Milton.

"This is my idea of great stuff. All kinds of speed with all kinds of comfort."—Ira Vail.

"I got more kick out of that ride than running 135 miles an hour around the track."—Harry Hartz.

"I am crazy over the way she banks on the turns."—Ray Harroun.

"Fifty-five miles an hour in the Baby Gar feels like two miles a minute on the track."—Wade Morton.

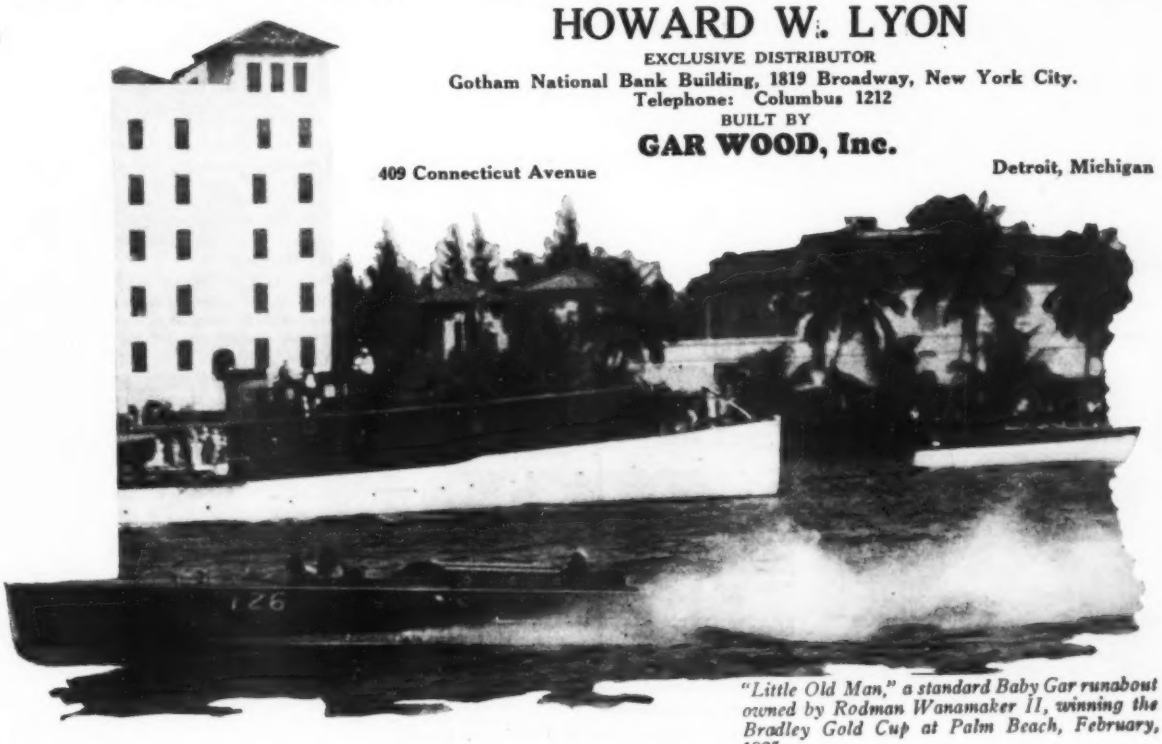
"I thought a speed boat had to be a mess of oil and engine. This one is as clean and quiet as a limousine, with no sign of the motor."—Peter DePaolo.

For Real Fun Get a Baby Gar

Two boats will be ready for June delivery. To avoid disappointment write or wire today for details or demonstration.

HOWARD W. LYON

EXCLUSIVE DISTRIBUTOR
Gotham National Bank Building, 1819 Broadway, New York City.
Telephone: Columbus 1212
BUILT BY
GAR WOOD, Inc.
409 Connecticut Avenue **Detroit, Michigan**

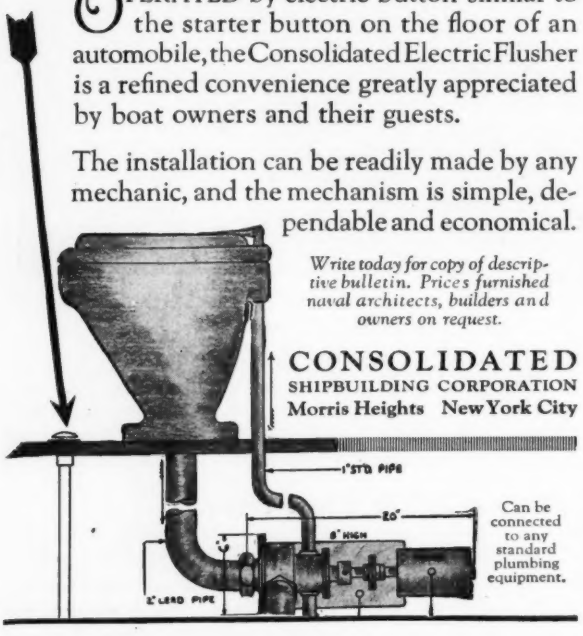


"Little Old Man," a standard Baby Gar runabout owned by Rodman Wanamaker II, winning the Bradley Gold Cup at Palm Beach, February, 1925.

CONSOLIDATED
ELECTRIC FLUSHER
for Cruisers and Yachts

OPERATED by electric button similar to the starter button on the floor of an automobile, the Consolidated Electric Flusher is a refined convenience greatly appreciated by boat owners and their guests.

The installation can be readily made by any mechanic, and the mechanism is simple, dependable and economical.



Write today for copy of descriptive bulletin. Prices furnished naval architects, builders and owners on request.

CONSOLIDATED
SHIPBUILDING CORPORATION
Morris Heights New York City

Can be connected to any standard plumbing equipment.

For Outings-Picnics-Camping!

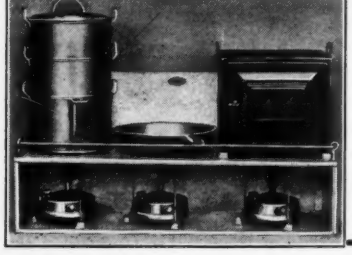
G Washington's **DELICIOUS INSTANT** *Coffee*

Convenient-compact-saves weight and space. Delicious coffee instantly-just add water. No coffee-pot needed. Trial size 10 cents. Booklet free.

G. WASHINGTON COFFEE REFINING CO.
76 VARICK STREET, NEW YORK

WEBBPERFECTION

Yacht Stoves burn common kerosene with a hot blue flame. Convert the fuel into a dry gas which is controlled by a needle point valve. Perfect combustion. No odor. Absolutely safe. Does not affect insurance rate. Made in one, two and three burner outfits, with steamers, ovens, etc., that fit.



We also build high grade yacht ranges for coal or oil fuel. Complete for roasting, baking, boiling, broiling, etc. A favorite for years with leading Naval Architects.

Used on most prominent yachts afloat.

Write today for catalog and prices

Elisha Webb&Son Co.
136 Front St., South, Philadelphia, Pa.

Among the Glaciers of Alaska

(*Continued from page* 126)

asked the man to explain. This he did, saying: "You made a number of those pictures from floating ice, didn't you!" "Yes," I replied. "Well don't you ever do it again. I can't make negatives like that. Furthermore, there isn't a photographer in all Alaska who will go aboard an iceberg to photograph anything. It's taking one's life in one's hands—and with buttered fingers at that. Any iceberg is liable to flop bottom-side up at any minute without the slightest warning. If they don't turn over they may crumble up under your feet. In either event you're a GONER!" He explained further that the icebergs being fresh water ice falling into salt water, begin to thaw as soon as they fall from the glaciers. The thawing occurs from underneath, so that eventually every berg gets topheavy and rolls over. I thanked the man for his kindly advice, and compensated him for the use of his laboratory by presenting him with a number of the negatives which were practically duplicates of others I'd made. I got back to Taku Inlet that night aboard the United States Naval Mine Sweeper Swallow, which was going down there to calibrate a radio compass station.

From Twin Glacier Camp, Wiedey and I had one more ambition to realize before we shoved off for the south again. We wanted to take Ikigihk into Twin Glacier Lake, a glacial pool up the Taku, where no motor boat had ever been. This lake is a huge glacial scar on the landscape fed by two enormous live glaciers, which are characteristically named—Twin Glaciers. The lake discharges into the Taku River through Twin Glacier River. The latter stream is short and swift. It drops to lower elevations very abruptly, and in mid-summer carries almost as much ice as it does water.

We left the camp at daylight—3 o'clock in the morning, and shoved off up the Taku, with the little motor forcing the boat up against the swift current at just about one mile per hour. We were constantly zig-zagging back and forth to avoid oncoming cakes of ice, or treacherous whirlpools; but eventually we managed to cover the few miles of distance that lay up the Taku between the camp and the mouth of Twin Glacier River. We swung into Twin Glacier River. We didn't go a hundred yards before we came to a rapid where the force of the current completely neutralized the power of our motor. Great icebergs were constantly thundering down these rapids in an endless procession. Any one of these bergs crowding Ikigihk against another, or against the shore, would have crushed her like a grain of wheat between millstones. There was no means of avoiding disaster except by artful dodging. Nevertheless, with the aid of two Indian guides, motor, ropes, and poles, we conquered the rapids, and put-putted out among the ice floes of Twin Glacier Lake about noon. We spent most of the afternoon exploring the ice-floes, studying the myriads of waterfowl that rode on every iceberg, taking photographs, climbing over the glaciers, and listening to the constant groaning, crashing, creaking, and grinding of literally tens of millions of tons of moving ice. Returning to the river, the descent of the rapids into the Taku, where it had taken us three hours to get up, was made in scarcely more than that number of minutes. Tense, and almost breathless minutes those were, however—for, we shot down the stream at express train speed—half expecting every instant to feel the bottom of the boat leave us as we struck some hidden rock, or to feel the tiny craft crumpled up like an eggshell if we got caught between the ice masses with which we were racing. Tame and roomy indeed seemed the Taku when we started down it toward our camp after that dash through the rapids!

Two weeks later, after various and sundry experiences with everything from Woolly Winds to wetting waves, and from tides to ptarmigan, we were still in Alaskan waters, but had moved down the map about three hundred miles. Scenery, icebergs, and glaciers had become almost a drug on the market. We'd eaten salmon until we felt that we never wanted to look at another pink fish—not even in a can! Sorely in need of fresh meat, we took our rifles, and started out to find it. Some Indians with whom we'd talked the evening before near the mouth of a great river where we'd made our camp had told us: "Cross river. Plenty moose. Plenty beeg gizzle bear too. Climb tree. Moose come. Bang!" The old chief who did the talking spoke picturesque English, but his meaning was certainly clear. So, very early that morning we took Ikigihk across the river, and into a smaller stream that drained out of an enormous muskeg. We ascended this stream for several miles. There was only about two feet of water under our keel. Presently the stream began to grow so shallow we could scarcely navigate. Then we came to a beaver dam, and lifted the boat over it. Above the dam there was plenty of water—thanks to the beavers. Several beaver dams made the stream navigable for us right into the

(*Continued on page* 132)

Advertising Index will be found on page 166

"4000 Miles in a few months -Never Failed Once"

Arthur Ohme's Typical Tribute to the dependability of his Johnson Motor

TYPICAL because *absolute dependability*—and nothing short of it—was L. J. Johnson's aim when five years ago he determined to make the Outboard Motor a practical means of water transportation instead of a clever novelty.

For example, take Mr. Ohme's 4000 mile journey on Lake Michigan, Lake Superior, and down the Mississippi River to Moline, Illinois. Many such cruises as this attest Johnson's true marine engine dependability.

That's how the Johnson owner *knows* that his Johnson will always take him where he wants to go—and bring him back. That's why more Johnson Motors were sold during 1924 than any other make.

The Johnson is the *one* outboard motor that can be instantly attached to all types of boats and canoes without altering any of them.

It drives a rowboat from 7 to 9 miles per hour, a canoe from 9 to 12.

Johnson is the only really portable motor—its complete weight is

Only 35 Pounds

35 pounds—complete and ready-to-run. The Johnson is vibrationless. Its only sound is a gentle purr.

It is easy to start and safe to start at any temperature. The ease of handling the Johnson is a revelation.

Power Increased in 1925 Model

In the 1925 Johnson, power has been increased 25-30%.

Improved Super-Quick Action Magneto makes starting easier than ever.

Johnson Shock Absorber Drive (Patented) is standard equipment. This Drive permits running over submerged obstructions without injury to motor or propeller. Yet the remarkable weight of 35 pounds is retained.

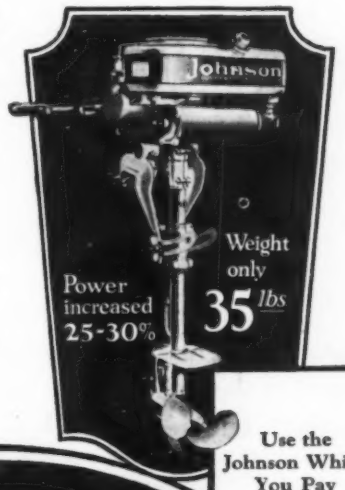
There's a Johnson dealer near you who will be glad to give you a free demonstration.

If you don't know him, mail us the coupon below and we will send you his name and the 1925 Johnson catalog.

JOHNSON MOTOR COMPANY
860 Sample Street, South Bend, Ind.

Eastern Distributor and Export:
New York Johnson Motor Company, Inc.
4 West 61st Street, New York City, N.Y.

Canadian Distributor:
Peterborough Canoe Company
Peterborough, Ontario



Use the Johnson While You Pay for It

Get details of our Deferred Payment Plan from your dealer—or direct from us.

Johnson
OUTBOARD MOTORS

GET INTO THE BOAT AND SEE FOR YOURSELF

JOHNSON MOTOR COMPANY
860 Sample Street
South Bend, Ind.

Gentlemen: Kindly send me the name of the nearest Johnson dealer, your FREE catalog and details of the Deferred Payment Plan.

Name.....

Address.....

City.....

State.....

PALMER ENGINES
TRADE MARK REG. U.S. PAT. OFF.

Use a Palmer

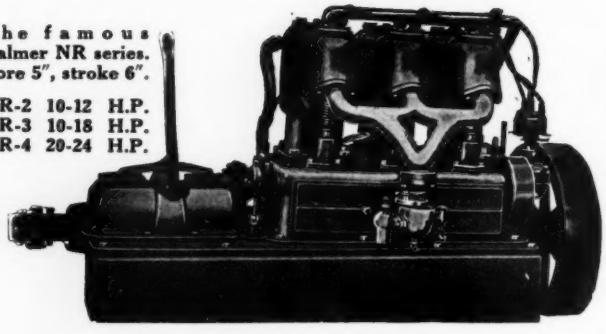
The difference will surprise you

Palmers Are Popular

in Models and Prices

The famous Palmer NR series. Bore 5", stroke 6".

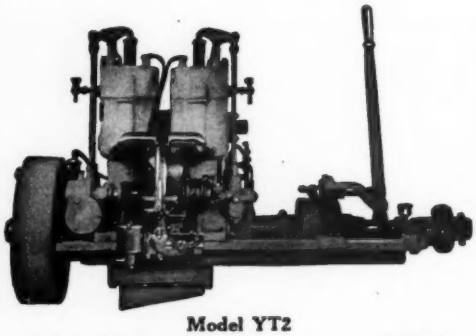
NR-2 10-12 H.P.
NR-3 10-18 H.P.
NR-4 20-24 H.P.



IT matters not whether your power requirement is for a light runabout or a commercial boat hauling a heavy cargo—there is a Palmer engine to meet it—and at a price you would feel justified in paying.

This organization has long been recognized as the producers of the largest and most complete line of marine engines on the market, including both four cycle and two cycle engines. Recently the Palmer YT-2 was introduced—the vast number of this model sold and the popular accord it received everywhere proves that Palmer principles are right.

A brute in a small package describes the YT-2. Individual cylinders with detachable heads. Combination splash and force feed oiling system. Counter balanced crankshaft. All bearings are bronze backed die cast and interchangeable. Ignition, high tension magneto, equipped with impulse coupling, assuring easy starting.



Model YT2
Price with reverse gear.....$240.00
Price without reverse gear..... 200.00

Palmer Engines are carefully designed and built to meet every marine requirement. 2 H. P. to 80 H. P., high speed, medium duty and heavy duty. There is usually a choice of two or three models from which to select a power plant to meet a particular need. And everyone is a proved success.

May we send you further particulars? Write today.

PALMER BROS., ENGINES, Inc., Cos Cob, Conn., U. S. A.

BRANCHES AND DISTRIBUTORS:

New York, 128 Lexington Ave., bet. 28th and 29th Sts.
Baltimore, 306 E. Lombard St.
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Norfolk, Va., Gas Engine & Boat Corp.
Jacksonville, Fla., 122 So. Ocean Street.
Vancouver, B. C., V. M. Dafoe.
Tampa, Fla., 233 So. Water St.

Advertising Index will be found on page 166

GREZAGERE is *not* an engine grease. It was not made for that purpose. GREZAGERE was developed to meet a more severe lubricating condition —the *special work* of reaching every moving, meshing part of a reverse gear.

Picking up power and turning it backwards calls for interlocking parts, meshing gears and moving friction discs—an assemblage of units, one depending on the other, working and rubbing together, each needing a protecting coat of grease or oil to produce a smooth efficient interlocking without wear. It requires a special lubrication of special consistency to spread throughout the gear and separate each moving part.

Gears wore out, not because of faulty workmanship, but because two parts worked smoothly together in lubrication while two others ground raw. Letters came into us asking for a grease adapted to reverse gear lubrication. Five years ago we went out to make it.

We set gears up, put them through worse service than a boat could give and from these tests built up GREZAGERE for lubricating Paragons and all other makes of reverse gears. It gets between each part in every part of the gear. It is thin enough to crawl through shafting grooves and spread an even coating between discs, yet thick enough to hold a tough consistency and not run out of the gear.

Write us for a can of GREZAGERE, and give your gear a smoother quieter, longer life without the breakdowns and wearing of parts that are traced to the faulty lubrication of ordinary grease in reverse gears.

Made By The Makers Of Paragon Gears

GREZAGERE GREASE GREZAGERE OIL

PARAGON

GreZaGere

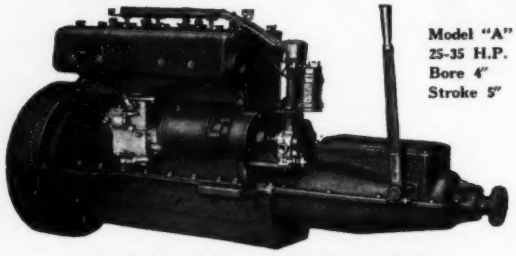
REVERSE GEAR GREASE AND OIL FOR ALL MAKES

Manufactured by—The U. S. Oil Company, Providence, R. I.

for the

PARAGON GEAR WORKS · 191 Cushman Street · TAUNTON, MASSACHUSETTS

ROBERTS MOTORS

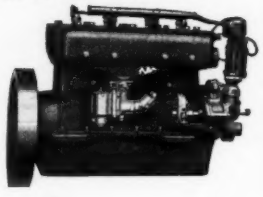


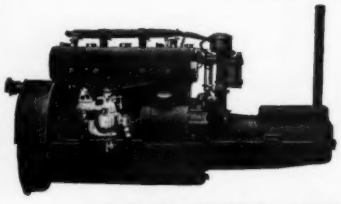
Model "A"
25-35 H.P.
Bore 4"
Stroke 5"

Price $388.00, without reverse gear or starter.

Model "J" 16 H.P. Bore 3¾", Stroke 4". The lowest priced engine in America. Complete as shown, $197.00.

Interchangeable with Ford parts.





Model "R" 16-20 H.P. Bore 3-25/32", stroke 4". Price complete without reverse gear or starter, $250.00.

ROBERTS MOTORS
SANDUSKY, OHIO

DO NOT RUST INTO THE CYLINDER

Sootless Spark Plugs

Keep 100% efficient for life of plug, which averages 3 to 6 years

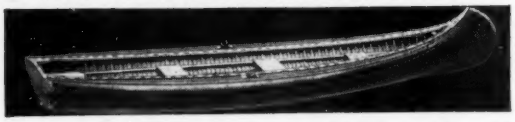
This makes a big saving in Gas and Oil

Manufactured for 22 years

Send for leaflet.

THE OAKES & DOW CO.
Cor. Mystic Ave. and Fellsway
Somerville, Mass.

"Old Town Canoes"



This square stern canoe with an outboard motor develops remarkable speed

HERE is an "Old Town Canoe" especially designed for portable motors. This canoe combines the pleasure and speed of a high-priced motor boat with the shallow draft, economy and easy handling of a regular "Old Town Canoe."

Square Stern Canoes are made with or without sponsons (air chambers).

The 1925 catalog shows all models, gives prices and complete information. It is free. Write for your copy today. OLD TOWN CANOE CO., 586 Middle Street, Old Town, Maine, U. S. A.

Among the Glaciers of Alaska

(*Continued from page* 128)

heart of the muskeg, or some six miles back from salt water. Eventually, however, we came to the head of navigation, and made fast to a huge spruce tree—the only tree in the muskeg. Climbing the tree for a perpendicular eighty feet, we scanned the muskeg with our field glasses. For half an hour we pawed mosquitoes and moose flies, and looked for game. A few minutes later we saw five moose—three of them bulls with legal hatracks. They sauntered out of the muskeg into a thicket of brush about a mile away. We promptly shinned down out of the tree.

Now, making a sneak through a marsh for a mile in quest of game that one is badly in need of for food, sounds simple and easy. But, in an Alaskan muskeg—well, it's a man's job! Picture yourself, if you can, sloshing along in a pair of clumsy hip boots in slimy mud and water up to your knees, and in coarse grass higher than your head. The grass is like so much rope. It is matted and tangled, and full of heavy brush that's too high to climb over, too tough to be broken, and too noisy to be tampered with. Rain is coming down in torrents. There's a cloud of mosquitoes trailing you, and kept from carrying you off in pieces only by the kerosene coating over all exposed flesh. You struggle and fight through mud, water, and brush. You paw mosquitoes, and swat moose flies, and unless you're a person of greater forbearance than Job himself, you'll develop a lurid vocabulary.

You fall down every hundred yards, and come up with twenty pounds of water in each boot. By this time you're wet from head to foot, and have ceased to care how often you fall down. You learn to sit down in the water, and empty your boots by putting your feet in the air. Then about every two hundred yards you come to a long lagoon. It's cold, wet, murky, black water. There's no going around. It's too deep for your boots, and too wide to be jumped. So, you splash right in, and your teeth rattle as you go down until the water touches your chin. You struggle into the grass again, drain your boots out, and push on. That's moose hunting! I'm convinced that sport's been overadvertised.

We finally worked our way up to within a hundred yards of the point where we'd seen the moose enter the thicket. There we came to a lagoon, and in prospecting its depth, I bogged down until my hat went adrift—rifle and field glasses held high overhead as I went out of sight. Just as I came up for air, and began scrambling for the tall grass, Wiedey's rifle roared three times in quick succession. I crawled out of the water with the exclamation: "What are you shooting at?" "A moose," he replied. "He's down over there." We spent the rest of the day quartering the huge animal, and portaging meat through the muskeg to our boat. Moosemeat was the mainstay of our diet for the next two weeks. The value of this food soon showed in our physical condition. We began to gain in weight and strength, and our energy for hard labor showed an appreciable impetus.

If tides are an important factor in the navigation of ships through the salt water river, they are of far greater importance to the navigator of a low powered craft such as ours over the same route. A little experience soon proved to us that we could take our little boat from Alaska to Seattle virtually without power, or that we could detonate a day's supply of gasoline with Ikigihk moving backward like a crawfish. The sad error of underestimating the force of an opposing tide was illustrated to us one day after we had passed out of Alaskan waters, and got down the coast of British Columbia into Canada. Passing through a wide strait which we assumed to be almost tide free, we rounded a rocky point, and encountered a fog as thick as the proverbial bowl of pea soup. Our charts showed 50 miles of clear sailing dead ahead, so we took our course from the charts and the compass, and forged along with the motor churning full throttle. For six hours we kept going, which at our normal cruising speed should have moved us about fifty miles down the map. Along toward mid-afternoon the fog lifted, and to our dismay—there we were churning the water absolutely abeam of the identical point where we'd encountered the fog. We'd shot five gallons of gasoline and half the day getting nowhere. A few minutes later the tide turned, and we began going with it at a prodigious rate of speed. By watching the charts, and logging various points on the shore as we came abeam of them, we found ourselves flying down the salt water river at a speed of approximately 22 knots. About 8 knots of this was boat speed. The rest was tide.

Late that afternoon we sighted an Indian in a motor boat fishing for halibut. The boat was about half a mile off our starboard bow when we sighted it, and about that moment the Indian hooked a huge fish. We could see him struggling with the monster, very distinctly through our field glasses. We altered our

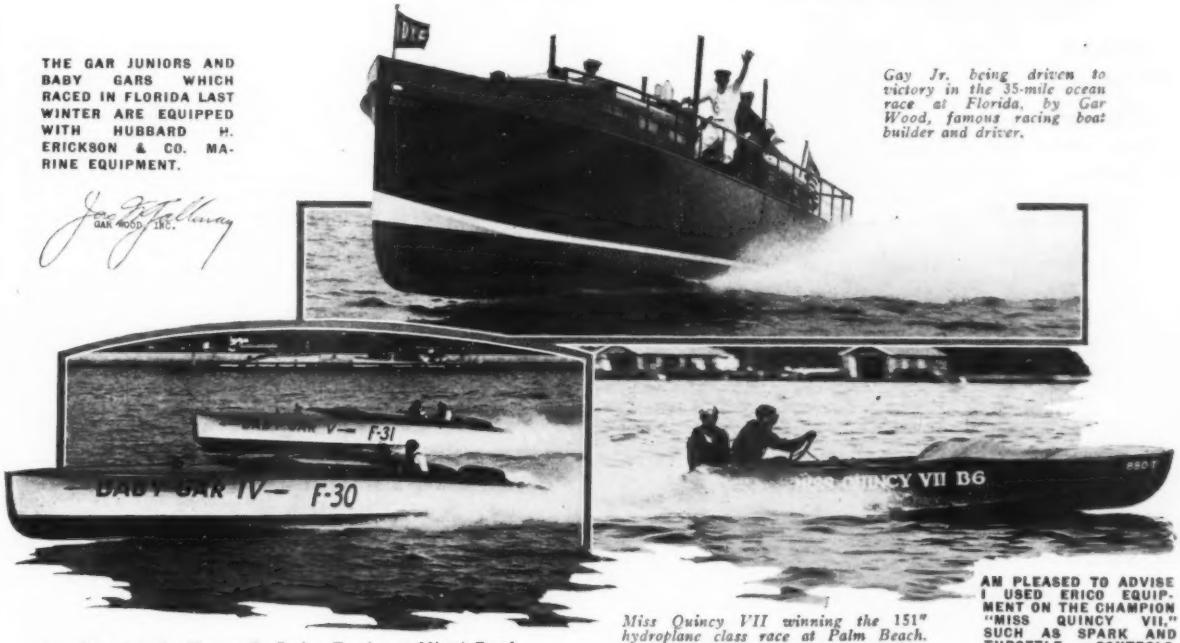
(*Continued on page* 134)

Advertising Index will be found on page 166

The Winners of Three Florida Races are ERICO Equipped

THE GAR JUNIORS AND BABY GARS WHICH RACED IN FLORIDA LAST WINTER ARE EQUIPPED WITH HUBBARD H. ERICKSON & CO. MARINE EQUIPMENT.

Joe Wallace
GAR WOOD, INC.



Gay Jr. being driven to victory in the 35-mile ocean race at Florida, by Gar Wood, famous racing boat builder and driver.

Race for the Horace E. Dodge Trophy at Miami Beach, won by Baby Gar IV, with Baby Gar V second. Both boats are ERICO equipped.

Miss Quincy VII winning the 151" hydroplane class race at Palm Beach. C. E. Padgett, boat and engine builder of Quincy, Ill., owns the Miss Quincy VII.

AM PLEASED TO ADVISE I USED ERICO EQUIPMENT ON THE CHAMPION "MISS QUINCY VII," SUCH AS SPARK AND THROTTLE CONTROLS, WATER INLET AND OUTLET FITTINGS, UNIVERSAL STUFFING BOX, ETC. IN ALL MY BOATS I USE ERICO ACCESSORIES AND FIND THEM VERY SATISFACTORY.

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RACING boats are built not only to win races but also to give many years of usefulness. So it happens that the more successful boats designed for high speed races are built with more than extraordinary care. Each item entering into the construction and equipment is decided upon only after it has proven its qualities are superlative. You will find that in the choice of accessories for racing craft that ERICO accessories usually predominate on account of their high quality, correct design and good craftsmanship. ERICO accessories are preferred by naval architects and boat builders who build the better class of boats.

Write for latest catalog

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ERICO Accessories for Your Boat

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MAST HINGES

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STERN FLAG STAFF SOCKETS

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COLUMN SPARK AND THROTTLE CONTROLS

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DOMAN "BULLDOG"
Extended base and Reverse Gear

4-5 H.P. Four Cycle, Bore 3¾" Stroke 4½"

Five Year Guarantee

SMALL boat owners choose the Doman Bulldog as the most serviceable 5 H.P. four cycle engine suitable for their requirements. And why? One reason is the 35 years experience in marine engine building and designing that is back of it. Other reasons are its durable construction and advanced design embodying overhead valves, removable cylinder head, one piece drop forged cam shaft hardened and ground, cut semi-steel gears, and ball thrust bearings. Bearings are bronzed backed, die cast, removable and interchangeable.

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Standardized cruisers 33, 36, 40, 45, 50, 55 and 62 feet and runabouts 26 and 28 feet in length. Special or custom jobs any size or type up to 150 feet in length.

ROCHESTER BOAT WORKS, INC.
10 Charlotte Station Rochester, N. Y.
Originators of the standardized enclosed bridge deck.

Among the Glaciers of Alaska

(*Continued from page* 132)

course, thinking to get a better view, and possibly a photograph. To our dismay, however, we soon discovered that the Indian's boat was at anchor in an 18 knot tidal current. In spite of our best efforts Ikigihk went astern of the Indian's craft by just about half a mile, our best motor speed being useless for trying to get closer. Sweeping on down the strait we could see the Indian still struggling with the fish. He went out of sight behind a distant low-lying island without our being able to see whether he ever got the fish aboard or not.

Due to the lateness of the season, and the amount of time we'd spent in Alaska, we encountered much unfavorable weather. For a week on end we sailed, or put-putted in downpours of rain. We hunted and fished in the rain, camped in the rain, and literally lived in rain, until we almost forgot what it felt like to be dry. When the sun did shine it was usually accompanied by high winds that took Ikigihk southward under reefed sail like a migrating gossamer. If the rain stopped, and the wind blew, we were perpetually wet just the same—the only difference being that we were wet with salt spray instead of rain.

For the sake of greater safety, and to help us keep our bearings through this seemingly interminable labyrinth of lace pattern waterways, we followed the commercial steamship lanes much of the time. But, when our charts showed that we could save many miles of travel by taking short cuts back of islands, or through channels where only very small boats could pass, we usually took the short cuts. In exploring through some of these diminutive passages, however, where we found our charts none too accurate, we got lost so often that we lost all track of the number of times. Sometimes we'd be lost for a day or two, but we always managed to turn up in the steamer lanes again—and invariably with a saving of many miles. There was a great thrill to getting lost occasionally, and picking our way through titantic water-canyons—many of them utterly unexplored, and off the beaten trail where travelers never get. One experience in Seaforth Channel was typical of many others. We had been lost for about three days, and on the third day, without knowing exactly where we were on the map, we had jogged along for some 60 miles through a very narrow water canyon where the walls of perpendicular rock rose to ice-capped heights some eight or ten thousand feet almost over our gunwales. A strong tide with which we'd been moving gave assurance that we'd eventually pop out into open waters again. And, we did.

The narrow channel suddenly terminated into a monstrous bowl-like lake of salt water. Seventeen different water canyons opened out of this lake like the spokes of a wagon wheel away from the hub. We were racking our brains over the charts, trying to figure out which of the water trails we should take, when a steamer came bounding out of one of the holes on the north side of the lake. It was one of the Canadian Pacific passenger boats, and was going south. The steamer ate up the distance across the lake like a buzz-saw eats through a board. We shut down our motor, hove to, and watched the steamer. It got to the other side of the lake, and dived into one of the water canyons, and out of sight, like a rat going home. We followed the ship, and soon had our position verified on the charts.

Twenty days after we'd passed out of Alaskan waters we sped down the east coast of Vancouver Island on a mill race tide, rounded Fear Island Light House, and slipped into Victoria, provincial capital of British Columbia. We spent a week ashore there in this picturesque city, which is a bit of England set down in the new world. We had many friends there, and a glorious time. The Canadian Government liquor stores supplied the drinks—and it didn't taste like horse liniment or varnish remover either! It was a wicked temptation to try and smuggle a few bottles of this stuff with the Canadian Government seals over the corks, across the sounds into Seattle; but out of respect for American law we sailed from Victoria with Ikigihk as alcoholically dry as old man Volstead himself. We took nothing aboard but 20 gallons of gasoline, a few groceries, and shoved off into the Strait of Juan de Fuca. The strait was lashed to a foam by an inshore breeze that was sweeping in against an outflowing tide. Bobbing around like a cork, and getting thoroughly soaked (with salt water) we finally hove into the lee of the San Juan Islands, and camped for the first time in two months on American soil.

The following day we sailed down the Washington shore to Seattle, and tied up at Colman Dock. It was within twenty minutes of time for the Federal Customs House to close for the day. We hailed a taxi, and hurried thither to report our yacht in. When the necessary papers had been signed, the clerk said: 'I'll phone Mr. Burton, one of the inspectors on the dock, and tell him you're on your way. If you hurry, you'll be able to get your boat cleared yet today."

(*Continued on page* 136)

The Hacker-*Dolphin* Runabout

The reliance which owners everywhere place in the superbly designed and built Hacker-Dolphin, manifests itself in their enthusiasm and praise for the consistent performance and economical operation of these craft.

No fear of a day's outing being spoiled by a breakdown, for the Hacker-Dolphin is more reliable than your car. Fewer working parts and a marine motor designed for marine use make this possible.

There is nothing makeshift about a Dolphin runabout. From stem to transom it has been designed for your comfort, for your pleasure and for your safety.

To better serve owners along the seaboard, we announce the establishment of eastern offices in the Equitable Life Building, 393 7th Ave., New York

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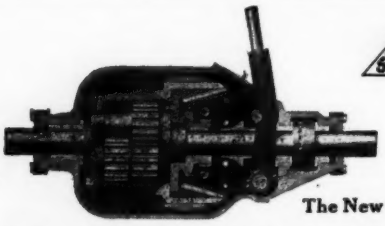

The New Standard

The Standard Multi Cone Clutch is the most positive, yet most easily operated motor boat gear control on the market. The cones cannot buckle, warp or stretch, and the longer they are used, the better they get. A feature of the new clutch is its easy adjustment.

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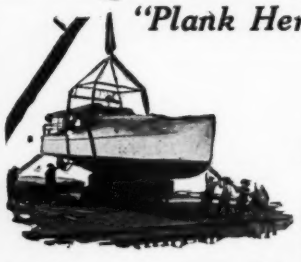

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"The Wood Eternal"

AND YOU PLANK BUT ONCE"

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"THE BEST LUMBER FOR BOATS, BIG OR LITTLE"

Let the Tides Help You

(Continued from page 47)

the current turns east at the entrance. Turning to page 47 of the current Tables, Atlantic Coast, 1925, it is found that the current turns easterly (Southeast) at the entrance at 8:02 A. M. on December 25th. She should, therefore, leave her anchorage in time to pass Wolf Trap Light one hour earlier (at 7:02 A. M.) to have the most favorable current conditions running up the Bay. Passing Wolf Trap Light at this time, she will carry a favorable current, averaging about eight-tenths of a knot, all the way to Baltimore, arriving there at the time of slack water following the flood (*k*).

From the foregoing two examples it is readily apparent that a 12-knot vessel can carry a favorable current all the way up the Bay by timing her departure. When bound down the Bay, however, a vessel cannot obtain current conditions quite so favorable, for she must meet and pass through one flood, or contrary current.

To illustrate, let us take a 12-knot boat, desiring to leave Baltimore for Cape Henry on September 30, 1925, in the morning. At what time should she get under way so as to carry the most favorable current?

Place the parallel ruler edge along the 12-knot speed line Bound Southward. Transfer this direction to the diagram and move it along so as to include the greatest number of larger current velocities in the unshaded (Ebb Current) portion of the diagram (dashed line *g h*). The most favorable time thus found for leaving Baltimore is 1h (one hour) after current turns west at entrance (*L*). On page 46 of the Current Tables we find that the current turns westerly (northwest) at the entrance at 4:15 A. M. on September 30th. The vessel should therefore get under way from Baltimore at 5:15 A. M. on that date. An inspection of the dashed line (*g h*) will indicate that the boat as she leaves Baltimore will encounter a weak adverse current of only a few tenths of a knot to a point (*m*) about five miles below Seven Foot Knoll Light, where she will have slack water; from this point (*m*) to Cove Point Light (*n*), a disance of about forty-five miles, she will have a fair current (ebb). From Cove Point Light (*n*) to Bluff Point (*t*), a distance of about forty miles, she will encounter an adverse (flood) current averaging about half a knot. From Bluff Point she will have a strong, fair current of over a knot, all the way down to a point (*p*) just below Tail of the Horseshoe, a distance of about forty-five miles. Here she will run into slack water following the ebb.

In this attempt to bring out the advantages accruing to the motor boatman in the use of this graphic method for obtaining current conditions throughout a long waterway, the different steps have ben shown in considerable detail and therefore at some length. It is hoped that the motor boatman, as yet unacquainted with this method, may not be frightened away by the length of the description, for in reality it is a very simple operation. After the first time it may be performed in a tenth of the time required in the reading. The writer, too, asks the indulgence of those who require less detailed explanations and who have been a step ahead of the detail. His desire is to serve the whole fleet of motor boats and all those whose interest in motor boating is not limited simply to weighing anchor, setting the course, and allowing a kind Providence to take care of the other details.

Among the Glaciers of Alaska

(Continued from page 134)

Returning to the dock, the tide had reached low level, and Ikigihk was riding about 25 feet below the deck of the wharf against a spider-legged assortment of tarry, oil-soaked piling. "Where's the yacht?" asked the customs officer after we'd found him. The boat was pointed out, and the Government official snickered. "So, that's the yacht!" he exclaimed. "Where'd you come from with that peanutty little sea louse?" "From Skaguay, Alaska," we responded, 'and in from Canadian waters today." This officer was diplomatic. He didn't come right out and ask me what relation I might be to Ananias—but, the look I got! Oh! That look! The inspector then crept to the edge of the wharf, and took a squint down the greasy piling which seemed to be the only route for making a closer scrutiny of Ikigihk and her cargo. "What have you got in those bundles?" he asked. "Just camping out," we replied. "No booze, no drugs, no Chinamen?" queried the official. 'Well, run along then. That thing doesn't look like a smuggler's outfit to me!"

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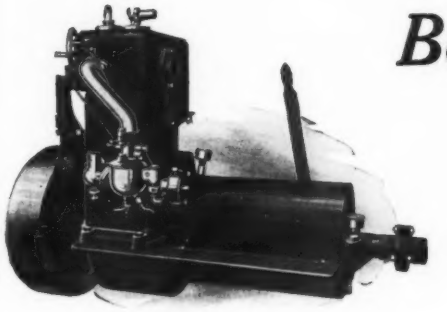
MILLER



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4 and 6 H.P.

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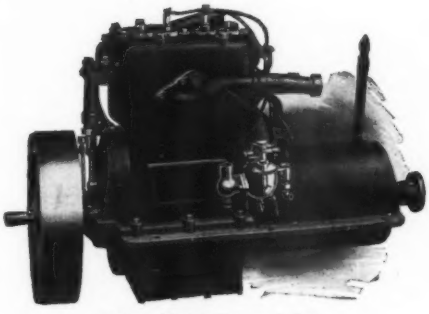
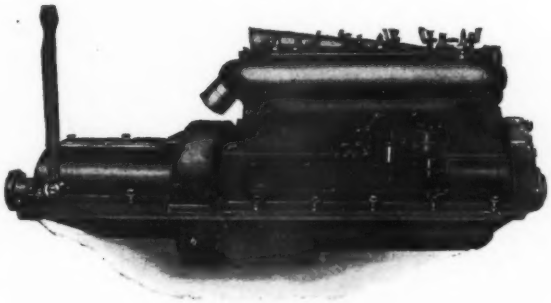
YOU cannot tell how reliable a marine engine is by its price, but you can tell by studying its design, construction and operation. Miller marine motors have long been noted for their great endurance and low maintenance cost. These characteristics of Miller service are the result of the careful thought given to their design and the close attention given to each step in the manufacture of Miller motors. All moving parts are built to minimize wear, upkeep and trouble. Valves are of large diameter and properly proportioned. Large hand hole plates on each side of motor give free access to interior parts. The complete neatness and simplicity of Miller construction appeal equally to the discriminating boatman and the man with an engineering trained mind. You will find a Miller motor in many types of craft flying the national emblem of practically every country in the world.



Miller Model F-2 and I-2
Medium Duty, 2 Cylinders
10 and 14 H.P.



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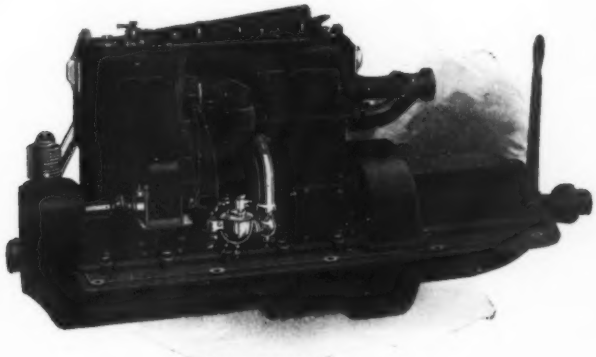

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Medium Duty F-4, 18-24 H.P., I-4, 24-30 H. P.
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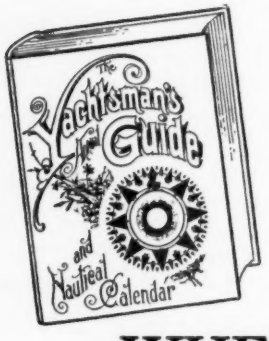

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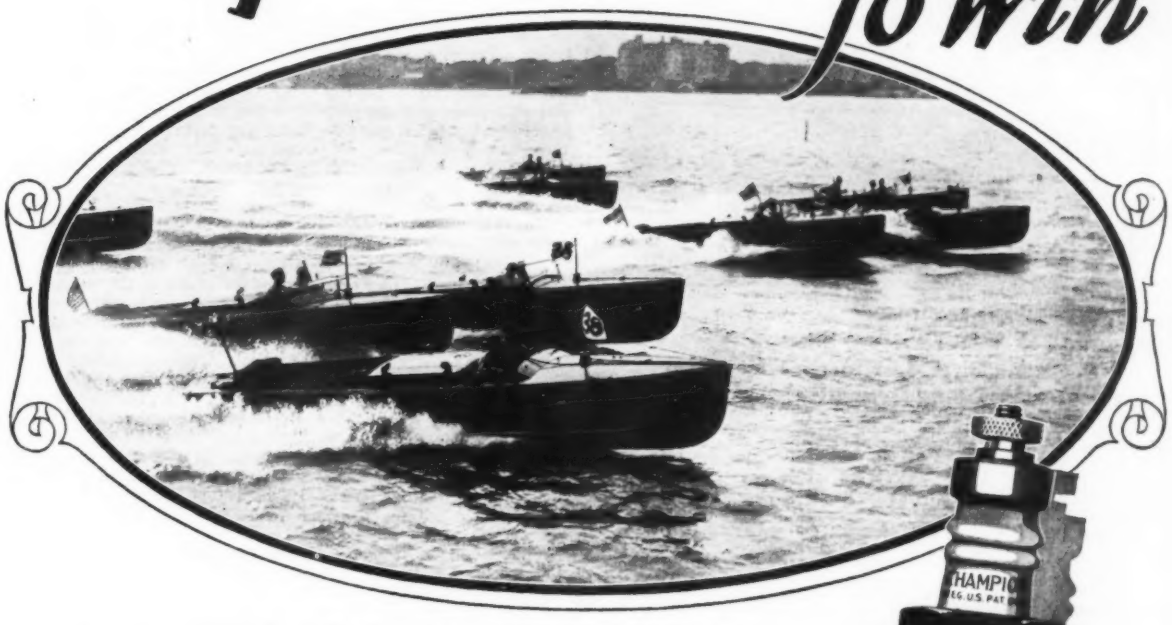
Champions Give The Power To Win



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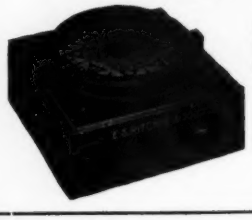

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A 23-Ft. Cruiser Completely Equipped **$1495**

Including Powerplant

Our 23-foot cabin cruiser is an attractive, substantial and comfortable boat; constructed of A-1 materials and is built by skilled boat builders. 8-foot beam, 5-foot head room. Gray model. "ZB" marine motor. Write for catalog. We are also builders of any type of craft up to 75-foot types.

Richardson QUALITY BOATS

Richardson Boat Co., Inc., N. Tonawanda, N. Y.

Sunshine, A Flat Bottom Cruiser

(*Continued from page* 39)

which are becoming more and more popular. A motor of this kind developing between 7 and 10 h.p. will give the boat a speed of 7 miles an hour turning a 14-inch diameter by 10-inch pitch propeller 1,000 r.p.m. This would seem to be the better type motor for this particular job.

Excepting the punt-shaped boat, a craft modeled after the general lines of Sunshine is the easiest thing in the boat line to build, and requires for its size a minimum amount of lumber. An amateur can build a boat of this kind in a reasonable length of time and has the further advantage of not requiring a glittering array of tools for its construction. The straight sides are not so pretty as the moulded sections of the round bilge types, but they are just as serviceable. The boat is well proportioned and ship-shape looking despite its flat bottom and straight sides, and since utility is quite as important as beauty, I believe our little bateau will give full measure on the former score for the part measure she doles out on the latter; at any rate, she does not seem to be something she is not, which is something to boast about now-a-days.

Turning to the construction, we find the typical cross-planked boat with the keel and deadwood bolted to the bottom. The boat should be built just as all flat bottom craft are, with the bottom side up. The frames will take place of the usual form.

The frames will be made of 1½ by 2½-inch white oak and set on 30-inch centers. There will be an extra frame between the stem and station 1, with a second extra near the stern. Temporary cross members will be laid across the frames at tops and bottom until such time as the sides and part of the bottom have been laid.

The planking on the sides will be in five widths and of ½-inch white cedar. The seams will be backed with ⅝ by 3-inch white oak battens fastened into the notches in the frames with galvanized iron screws. The fastenings in the planking will also be galvanized iron screws 1¼-inch long, number 8 size, the heads being countersunk and afterwards plugged in the usual manner.

There will be a chine piece, as shown, made of 1⅛ by 3-inch yellow pine and in a single length. This must be through-fastened to the bottom of the side frames. It will be best to let the fore ends of the chine piece into the stem and to treat the aft ends the same at the stern.

The clamps will be made of ⅞ by 3-inch yellow pine and will be let into the tops of the frames, as shown. These, too, must be in a single length and well fastened to the frames, to the stem and to the stern board.

The stem will be made of yellow pine or oak sided 3 inches and moulded, as shown. It will be built up of two members and fastened together with ⅜-inch galvanized iron bolts. There will be a 1½-inch thick breast hook forward to take the ends of the clamps. This must be fastened to the stem with a ½-inch bolt.

The stern will be built over a frame of 1½ by 3-inch oak with ⅞-inch center battens covered with ¾-inch cedar in strakes not over 6 inches wide; the fastening to be the same as in the planking.

The keelson will be made of ⅞ by 8-inch yellow pine running the full length inside the bottom, and there will be sister keelsons each side made of ⅞ by 3-inch yellow pine. These should be put in over the temporary bottom members before the bottom planking is applied, for then they can be fastened to the under side of the stem and into the chine pieces, as the case may be.

The bottom planks will be laid athwartships, of ¾ by 6-inch cedar, fastened to the chine pieces with galvanized iron boat nails, using three nails to the end of each plank. The deadwood and keel will be made of yellow pine and white oak, respectively, and shaped as indicated on the plans. These parts to be through-fastened to the keelson with ½-inch galvanized iron bolts and screws.

There is a sort of a false keel each side the deadwood, which will be ⅞ inch thick and 2 inches wide. And two rub-strips of the same dimensions, both the latter being of yellow pine.

The hole for the shaft must be lined with copper or lead pipe, having both the inboard and the outboard ends flanged over so as to form a water-tight sleeve.

The deck beams will be made of ⅞ by 2¼-inch yellow pine, and set on 12-inch centers. They will be fastened into the rising which, will be made of ⅞ by 2½-inch yellow pine.

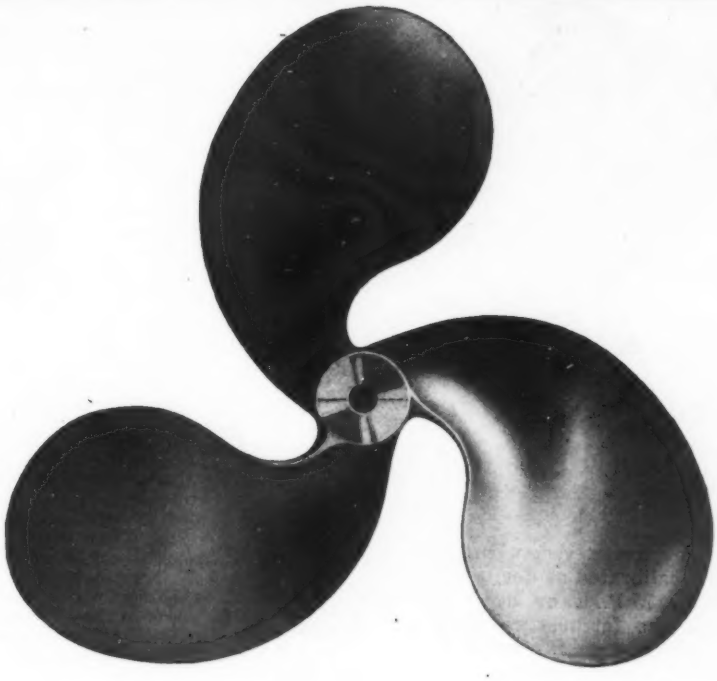
The deck should be made of ⅞ by 3-inch tongue and grooved white pine or some other equally light-weight wood, and then covered with 10-ounce duck laid in Jeffery's liquid glue.

The house sides and coamings will be made of ⅞-inch cedar to the form given in the table of offsets. The house sides will set on the deck and be held in place with the ⅝ by 6-inch

(*Continued on page* 142)

Advertising Index will be found on page 166

A sure-fire
3 BLADE
WEEDLESS



Cap'n Allswell says:

"It goes thru weeds like an eel"

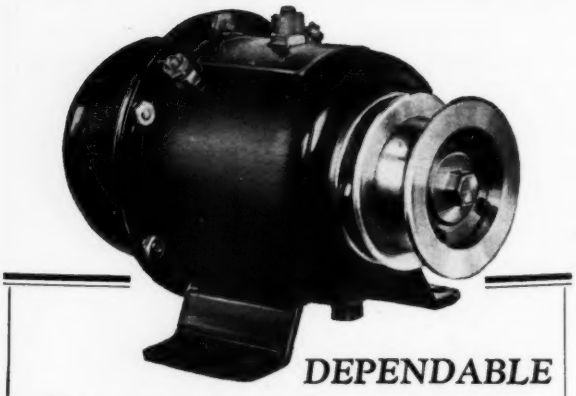
See that slideaway curve on the blade?

It slides out of a weed tangle as easily as an eel. But it's not an accident, that curve. It's the result of real science—the "know how" of designing propellers for particular needs.

Let us send you details on the complete line of Columbian Bronze Propellers.

THE COLUMBIAN BRONZE CORPORATION
204 N. Main St., Freeport, L. I., N. Y.

COLUMBIAN *Bronze* **PROPELLERS**



DEPENDABLE

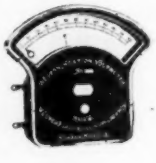
Speed Measurement by Weston Model 44 Magneto

And Weston precision Instruments calibrated as desired in R.P.M., M.P.H. or even in knots—the farthest commercial advance so far made in precise speed indication.

Although this Model 44 Magneto is comparatively a new Weston development, still its long life under the most exhaustive commercial and laboratory use, its maintenance of accuracy, and its diverse adaptability to all machinery has already made it a standard instrument with engineers.

There is hardly a process or a mechanical operation where rotational speed is not a factor of either efficiency of product or cost of operation, and this instrument has been created to give the most reliable speed-knowledge.

Practising as well as investigating engineers the world over have adopted Weston as a part of their creed of accuracy, practicability, and economy—and they can rely upon a Weston Magneto to answer all speed questions with Weston assurance.



For specific information on the Weston Model 44 Magneto, write for bulletin 3004.

Weston Electrical Instrument Corp.

28 Weston Ave. Newark, N. J.

Sunshine, A Flat Bottom Cruiser

(*Continued from page* 140)

cedar face piece, which forms the finish in the cabin. It would be well also to drive in five long screws from the under side of the deck as additional security here. The cabin carlins will be made of 1⅛ by 2-inch yellow pine and set on 12-inch centers. These will be let into the side and afterwards covered with the top canvas and the half round moulding which runs around the top of the cabin sides. The cabin top will be planked with ⅝ by 3-inch white pine and covered with 10-ounce duck in the same manner as the main decks.

The cockpit will be made with ⅞-inch sides and ends and has the flooring running athwartships. It is hung to the deck beams with ⅜-inch diameter rod, having nuts each end. On each side of the underside of the bottom there will be a hanging piece made of ⅞ by 3-inch white oak. It is this that the rods are fastened to.

The rudder will be made of 1½-inch yellow pine, as shown, and hung on the stern with regulation rudder gudgeons, having a rod run through as the pin for the rudder to swing on. Cheek pieces made of ⅝-inch white oak should be screwed on each side of the head of the rudder, forming a slot into which the tiller fits. And the tiller will be made of 1½ by 2-inch oak, tapering, of course, toward the grip.

The cabin house hatches, the slides, in fact, practically all of the joiner work outside, will be of white cedar. But the half round mouldings, and the foot rails forward will be made of oak. These few things should be varnished, but the rest of the hull should be painted.

It might be well to use deadlights in the sides of the cabin and open port lights in the forward and after ends, the arrangement of these depending upon the fatness of the builder's pocketbook. At any rate, fail not to fit the open light in the after end of the house, as this is the most useful of them all.

The motor beds will be made of 2-inch yellow pine and are of the simplest form, being nothing more than wedge-shaped pieces set at the correct distance to accommodate the motor installed. The beds should be through-fastened into the bottom with four ⅜-inch galvanized iron bolts. The heads should be outside, with big washers under them, so as to prevent working into the soft cedar of the bottom.

All of the interior joiner work should be made of white pine, as much of this as possible being ½ inch thick. There is a very cheap grade of white pine—Washington pine, perhaps it is—which works easily and paints well. It ts excellent lumber for this purpose. Inside, I suppose, should be painted white with a little cypress or pine trim, finished bright. White paint seems to be in vogue now, and it does make a cozy looking cabin.

The topsides should be painted in two colors, as indicated on the profile. For my own use, I should paint the sides below the lower sheer line black; the wales white; the bottom anti-fouling white; the decks fawn, and the cabin sides white. Or it might be well to paint the hull white, the wales varnished, and the house-side and coamings white. In this event, the bottom should be red or green.

For an awning I should have two stanchions, one to set in a flange on the deck aft and the other to rest in sockets on the after end of the cabin house. A line stretched over these leading from the scupper hole in the companion slide rail to the ring bolt on the after deck would form the rdge over whlch a light awning could quite easily be spread. This should not be high and would form the service of a sunshade for the after deck of Sunshine.

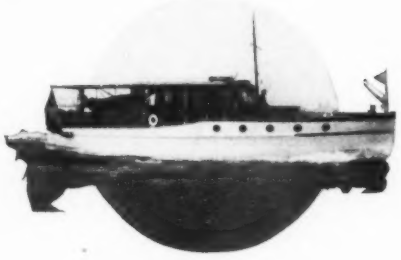
As a service to readers who wish to build this boat, and might want larger copies of these drawings to a scale of ¾ inch to the foot, arrangements have been made to supply blue prints at moderate cost. Write to the Editor of MoToR BoatinG, 119 West 40th Street, New York, N. Y., for particulars of cost, and how to secure prints.

Aluminum Pistons

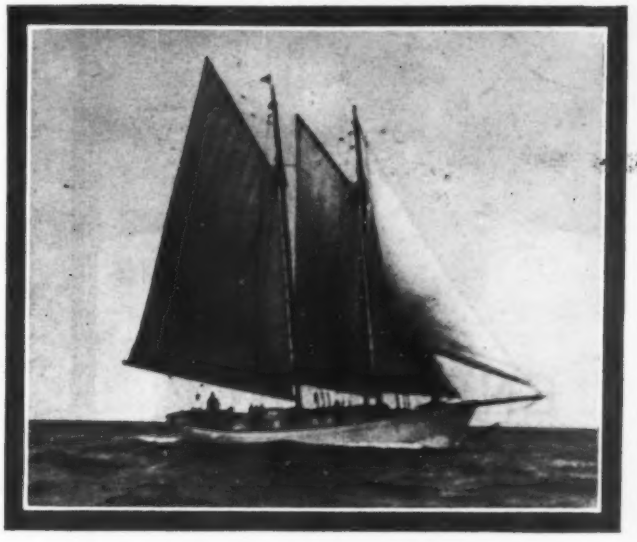
The use of aluminum and alloys of this material is becoming very extensive in marine engine construction. Many manufacturers today are using large quantities of this for special parts such as piston connecting rods and other reciprocating parts where lightness in weight are controlling factors of successful operation. The advantages claimed for lynite pistons include a reduction in vibration, higher permissible speed, reduced wear on the bearings, increased power, reduced fuel, and less carbon deposit. The Aluminum Company of America, Pittsburgh, Pa., have prepared a very excellent reference book for the use of mechanics and repair men, covering the proper installation of their particular types of pistons in engines and detailing the advantages of these over the ordinary types.

Advertising Index will be found on page 166

THE DAY OF THE OIL ENGINE IS HERE



"Florence V"—50' by 14'—using a 50 H.P., 4-cylinder CUMMINS Oil Engine. Owned by Wm. H. and C. S. Sampson of Chicago.

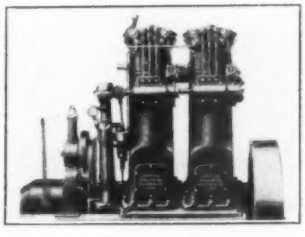


Auxiliary schooner "Swastika" powered with a 25 H.P., 2-cylinder CUMMINS Oil Engine. Owned by W. J. Herrmann, Chicago.

Fits Right In Where the Gasoline Engine Came Out!

NO wonder W. J. "Sport" Herrmann—like many other prominent boatsmen—has replaced the gasoline engine on his schooner "Swastika" with a CUMMINS Oil Engine.

It fits right in where his gasoline engine came out—is the same weight, and gives the same power—eliminates gasoline fire hazards—does away with all ignition worries—and one 150-gallon tank of oil gives him a month's fuel supply where it formerly took two 150-gallon tanks of gasoline per week. The CUMMINS Oil Engine is neat, clean, trim—doesn't smoke. Easy to start. Always gives steady, even power. Write for full information about this safe, dependable, economical oil engine for your cruiser or houseboat.

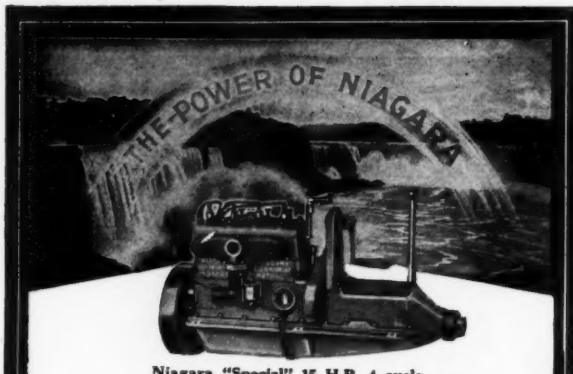


The CUMMINS Oil Engine—full Diesel in every respect—develops 12 H.P. per cylinder at 600 R.P.M. Built in one to six cylinder units, 12 to 75 H.P. Flexible as a gasoline engine—idles indefinitely, without attention.

Perfectly balanced—minimum vibration. Starts instantly, stone cold. No blow torches, cigarettes, or electrical apparatus. These many advantages are made possible by the CUMMINS simplified air injection which eliminates the expense and complication of high pressure injection air.

CUMMINS Oil Engines

CUMMINS ENGINE COMPANY Columbus, Indiana, U. S. A.



Niagara "Special" 15 H.P. 4 cycle.

ENDURANCE

THE capacity to endure is the test of the quality of material and design of a marine engine. Its ability to keep up the pace hour after hour, without overheating, without faltering and without "nursing." That stamina characteristic of Niagara Marine Motors is found in the Niagara "Special"—the huskiest motor of its size built.

It's an engine whose upkeep is by far the lowest of any on the market. It is simple to operate and is very accessible, light in weight and the most powerful in its class.

There is a Niagara for Every Type of Boat
Medium duty, Four cycle

One, two, four and six cylinders, 5 to 120 H.P.

See pages 86-158 of this issue for other Niagara announcements.

Write today for catalog.

Be sure to state the power you are interested in and the size of your hull.

BOAT BUILDERS, DEALERS and AGENTS—A popular motor is always the best seller—Niagaras are popular. Write today for full particulars.

NIAGARA MOTORS CORP.
BOX 300
Dunkirk New York

By Water Ways to Gotham

(*Continued from page 32*)

He was such a good sort of a chap, once the Nemesis-of-the-Law manner was cast off, that both of us promised. This is the first time, indeed, that I myself have told the story by any medium, so that if it chances that it has already been put in circulation among the Coast Guard stations the responsibility must rest upon the Captain's other prisoner.

Fifteen minutes' run through the excavated section of the canal took us out to the shallow waters of Sturgeon Bay and one of the most exquisitely beautiful sunsets at which I have ever caught breath or quickened pulse. One moment we were shut in between high banks of blasted fragments of limestone; the next this had fallen away like the wings of a stage setting and we were running through a mad rainbow revel of color that was swimming in the air, the earth and the waters under the earth. It was all of such an impossible dream-stuff sort of loveliness that for a space I could only gasp, and incidentally forget my steering until the bump of the bows on a channel-marking buoy shocked me back to reality again.

What had happened was really very simple—just a felicitous blending of three or four of Nature's moods and manifestations at the moment of sheer perfection. These were the props for the astonishingly splendid setting as catalogued after the pageant had faded: A glorious fair-weather sunset that throbbed through the whole scale of reds, from delicate rose-pink to vivid, flaming scarlet; a mile of gently sloping hillside blanketed almost solid with the virginal whiteness of newly opened buds of apple and cherry trees; a verdant stretch of sward running down to a zone of marsh thick-studded with the floating blossoms of yellow and white water-lilies; a reach of unrippling water stained to a bright golden-amber when it had drained down through the centuries-old layer of rotting woods beneath the moss of the fringing forests.

The kaleidoscopic riot of shifting colors was caused by the glow of the sunset striking down across the masses of cherry and apple bloom to be reflected in the golden mirror of the still waters of the bay. It would be as presumptuous as futile to attempt further to describe the result.

Running on a couple of miles to the water-front of the attractive little town of Sturgeon Bay, we tied up for the night in the slip of a boat-house a hundred yards above the draw-bridge which spans the narrow inlet. With the mosquitoes buzzing belligerently along the water, we were only too glad to accept the invitation of the owner of the boat-house to spread our beds on the veranda of his home, on the higher ground a hundred yards nearer the town. Our host, a genial Scot named McLean, had once made a voyage in a small motor boat around the north shore of Lake Michigan. He could give me little practical information about it, however, his rather hazy recollections being only of a rocky coast with many shoals and few people.

Rolling out at sunrise from the lilac-scented nook where we had slept, we were greeted for the first time since the day of our departure with a bright, clear morning sky. As the day was Friday, the thirteenth, however, we were loath to believe there was not a catch in the thing somewhere, and so phoned to the Coast Guard station for verification of our own weather forecast. When this indicated that the Government Observer was also risking his reputation of fair weather, we no longer hesitated to face the combination of day and date dreaded by mariners above all others.

A phone to Tellander's office in Milwaukee brought word that business would demand his return the following morning, but the bad news was tempered by tidings that several other friends were leaving the same day to rendezvous with me at Ephraim, on Eagle Harbor, for a final farewell party before I passed beyond the zone of auto roads. A hasty going-over of the engine in McLean's machine shop revealed that the motor was working off its stiffness and settling down to its long grind without a visible symptom of an ache or a pain.

My entrance to Green Bay from the Sturgeon Bay Canal discovered a radical change in the character of the coast line. Soft sand beaches were left behind practically for good, to be replaced by white limestone cliffs in Green Bay and by various native rocks along the north shores of Michigan and Huron. In fair weather the rock-bound shores made little difference; in foul they promised greatly to complicate the problems of landing. But for the day at least the skies were fair, and it was in order to make the most of them.

For the first five miles north of Sturgeon Bay the shores were steep-to, so that we were able to run along in deep water a biscuit-toss from the cliffs with no need of keeping a lookout for lurking shoals. The cliffs were mostly sheer fractures of glistening white limestone, hard pressed from the rear by a

(*Continued on page* 146)

Advertising Index will be found on page 166

Service—

Real Service, Man, is What "Old Man Joe" Offers You Fellows!

When you want a dependable gear, or part, usually you want **quick action**—and **mighty** quick action at that.

That is why Old Man Joe has selected a real live "he man" organization in each important boating center to serve you—all of them organizations that know boating and particularly reverse gears for experienced boat fans.

They carry ample stock—can make immediate deliveries—will be glad to help you out at any time no matter whether you buy or not.

Old Man Joe takes a pride in every gear he builds—knows each will always bring its craft into port and across the line on schedule time.

How, as man to man, can you consistently avoid using

JOES FAMOUS REVERSE GEARS

Reverse 80%—88% of Motor Speed when you get both service and a quality gear?

The Snow & Petrelli Mfg. Co.

154 Brewery St. New Haven, Conn.

Joes Gear Service Stations cover The Map of Almost Every Continent and Important Island in the World.

SALES AND SERVICE

Boston, Mass.—Gray-Aldrich Co., Inc., 6 Commerc'l Wharf.
New York—Sutter Bros., 44 Third Ave.; Service Station foot of E. 92nd St., Brooklyn.
Clayton, N. Y.—St. Lawrence River Motor & Machine Co.
Rochester, N. Y.—Volney E. Lacy, Charlotte Station.
Philadelphia, Pa.—W. E. Gochenaur Mfg. Co., 631 Arch St.
Baltimore, Md.—Unger & Mahon, Inc., Pratt and Gay Sts.
Detroit, Mich.—Henry H. Smith & Co., 334 Jeffs'n Ave., E.
Cleveland, O.—Wm. F. Meier, 1220 Warren Rd., Lakewood.
St. Louis, Mo.—William Grossmann Boat & Motor Co., 1630 Pine St.
Chicago, Ill.—W. L. Masters & Co., 800 N. Clark St.
New Orleans, La.—Arthur Duvic's Sons, 130 Chartres St.
Southern California—Fellows & Stewart, Inc., Wilmington.
Seattle, Wash.—Pacific Marine Engine Co.
Southern Alabama and N. W. Florida—Maine Supply Co., Mobile, Ala.
Canada—All Branches—Canadian Fairbanks-Morse Co.
Newfoundland—John Baron & Co., 241 Water St., St. Johns.
New Brunswick, P. E. I.—T. McAvity & Son, St. Johns, N. B.
England—J. King & Co., 10 Church Row, Limehouse, E. London.
Argentine, S. A.—J. Banham & Sons, Buenos Aires.
Victoria, Australia, Melbourne—Acme Cycle Co.
Japan and Australia—Melchoir, Armstrong, Dessau Co., 116 Broad St., New York, U. S. A.

JOES FAMOUS REVERSE GEARS

REVERSE 80%-88% of MOTOR SPEED

"New Jersey"
Marine Paints & Varnishes

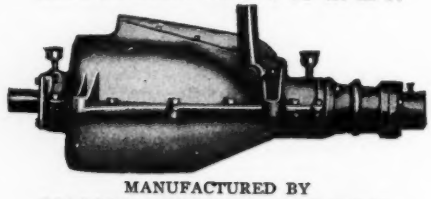
Copper Paint
Yacht White
Ship & Deck Paint
Spar Varnish
Copper Bronze

For Bottoms "New Jersey" Copper Paint Red, Brown or Green. For above the waterline "New Jersey" Yacht White will stand washing and scrubbing. "New Jersey" Spar Varnish will not turn white and holds its gloss.

Write for Booklet, "Davy Jones' Locker," About Paints and How to Use Them.

NEW JERSEY PAINT WORKS HARRY LOUDERBOUGH, INC.
WAYNE AND FREMONT STREETS, JERSEY CITY, U. S. A.

MASTER
BY NATURE AS WELL AS BY NAME
Used by Many of the Foremost Engine Builders as Standard Equipment.
MADE IN EIGHT SIZES—5 TO 450 H. P.



MANUFACTURED BY
MASTER REVERSE GEAR CORP.
105 SPENCER STREET CANASTOTA, N. Y.

MONARCH ELECTRIC PUMP
Silent, Economical and Efficient

This pump is used for flushing decks, pumping bilge or furnishing circulating water for heating systems or free running water to all parts of the boat. It's portable and can be used at home, in camp or factory. Free supply of water at all times assured. This pump is also supplied with the MONARCH ELECTRIC SELF-STARTER AND CUT OFF which automatically starts pump running when water in bilge reaches a certain height and automatically stops the pump when bilge is clear of water.

Monarch Valve & Carburetor Co.
12 Front Street Brooklyn, N. Y.

By Water Ways to Gotham

(*Continued from page* 144)

surge of forest, with trees in that rare riot of freshness just following the spring budding. Spring had come even later than usual on the northern lakes, and it was to be my happy fortune to ride the frothing, fragrant crest of the wave of early summer all the way to the islands of Georgian Bay.

Green Bay is small only by comparison with Lake Michigan, from the northwestern end of which it depends somewhat after the fashion of of an over-ripe and slightly bruised banana from its parent stem. It is nearly twenty miles wide at Sturgeon Bay and not much narrower at any point between its head and mouth. Clear as was the day, we saw only the smoke of the towns on the western shores, with the loom of hills showing but dimly at one or two points. We were not, therefore, running in anything approaching closely land-locked waters. The advantages the Bay afforded to small craft was in the lee its eastern shores provided against storms from the main lake and the availability of the shelter of small islands and a number of natural harbors, in both of which the west coast of the main lake was quite lacking. These advantages were partly offset by the openness of the Bay to northerly and westerly storms, and the fact that its very shallow waters were far more susceptible to the action of winds than were those of the deeper lake. It was Tellander's feeling, indeed, that, while it was easier to run to shelter in Green Bay, if it came to riding out a storm in a yawl or a schooner he would far prefer to take his chances in the big lake. For my own little shallop, however, there was no question but that I was far better off on the inside than the outside course.

Turning northeasterly with the bend of the coast five miles above Sturgeon Bay, we had our first opportunity to try out the behavior of boat and engine with head wind and seas. The wind was a couple of points off the port bow and just strong enough to stir the clear, shallow water up into waves a degree less than whitecaps. The fine flare of the bows clove through them admirably, with most of the spray blown back, being deflected by the first extension of the hood. With the boat deep down as she was, it was inevitable that some green water would pour over the windward gunwale in the rolls, but we learned to avoid most of this by carefully timed balancing. I was much encouraged to find that the propeller kept well buried even when the bow plunged into a trough, and so lost little if any of its forward-driving thrust. It was not near to threshing clear of the water and racing in empty air at any time; neither did the buffetings of the seas on the bows appear greatly to retard headway. I must, of course, expect weather in which there would be difficulties on all of these counts; at the same time it appeared that I was going to be able to keep the lake, and even make substantial progress, against conditions of wind and sea which I had hitherto been inclined to regard as prohibitive.

Egg Harbor, with its summer resort hotels, offered a convenient lunch stop, but we decided in favor of saving time and distance by standing on to Eagle Harbor for a party of our own on the beach. Rounding Eagle Bluff after passing the low, flat Strawberry Islands, we skirted Horseshoe Island and ran in to a landing on the inner beach of Shanty Bay. The latter is a southerly arm of Eagle Harbor and is distinguished as one of the few spots along the northern shores of Green Bay still uninvaded by the summer hotel or the (at times and places) almost equally irritating paying guest farms. A rotting landing and an abandoned cabin all but obscured by applebloom told of ancient inhabitants, but of latter-day invasions there was almost no sign.

And so in this delectable bit of wilderness Tellander and I made our first and our last joint camp. An explorative clamber through the woods, a swim where the golden-hued water was warmed in the embrace of a sun-baked loop of sand, a supper in which the camp culinary cunning of both of us was expressed to the Nth power, with a crackling pyrotechnical fire of birch-logs as a grand finale, conspired to carry the day to a climacteric pitch of idyllic perfection. Buzzing, boring mosquitoes that stung and clung and refused to give o'er their relentless fight for blood until the chill gray dawn of the morning after, came rather in the way of an anti-climax.

With the shrill trumpetings of the reenforced enemy sounding to renewed assault with the rising of the sun, no further reveillé was needed to roll us out for full retreat. Bathing swollen heads and hands in the cool water of the bay, we tossed off hastily brewed basins of coffee in the grateful smudge of rotten wood, threw our outfit helter-skelter into the boat and scudded away in a protecting smoke-screen of oil and gas to where civilization and safety beckoned behind the jetties of Ephraim.

It is always the initiatory battle with mosquitoes that is the

(*Continued on page* 148)

Advertising Index will be found on page 166

This Trade Mark On Boat Tanks

Guarantees Best Material and Workmanship

BOAT TANKS

Fuel Tanks
Water Tanks
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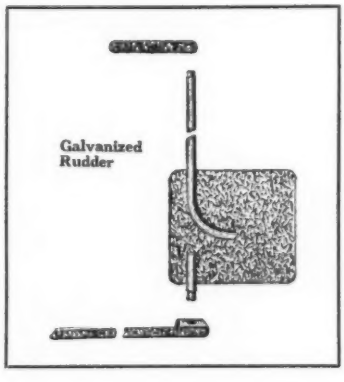

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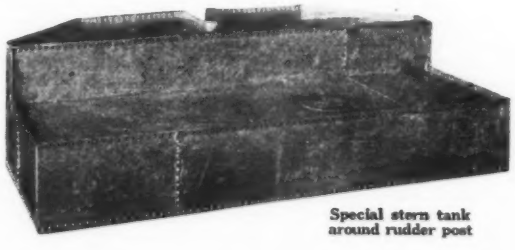

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Largest Tank Manufacturers Catering to Motor Boat Trade

154 Ogden Ave. **Jersey City, N. J.**

By WATER WAYS *to* GOTHAM

(*Continued from page* 146)

bloodiest. Physical and mental immunity come quickly with constant exposure, and finally brings the familiarity that breeds contempt. And an attitude of contempt is quite fitting and desirable with the mosquito of temperate regions which carries no malaria or yellow fever on the tip of its snout. With the festive anopheles and his brethren of the tropics it is, of course, quite another matter. I may add that, even as temperate zone mosquitoes go, those of the shores of the Great Lakes are a slight annoyance compared with the blood-thirsty hordes of such regions as the upper Missouri and lower Mississippi Rivers and practically all of Alaska. Doubtless, too, they serve a useful purpose in bringing the over-ecstatic camper back to earth now and then, like the fleas on the mongrel that David Harum reckoned were put there to keep him from forgetting that he was only a dog.

Tellander, his absence to be deeply and frequently regretted during all of the remainder of the voyage, caught the early bus out of Ephraim, en route to his neglected office. Toward mid-afternoon, while a considerable portion of the population—both permanent and transient—was gathered to give me practical advice on shaking down my outfit for the next leg of the voyage, two cars rolled down to the landing. One of these brought Ole and Mrs. Evinrude and their son, Ralph, just home from school; the other contained my genial playwright friend, Bernard K. Burns, and Mrs. Burns. The Evinrudes had been planning the little bon voyage party when I left Milwaukee, but Burns, fresh from his Broadway success with The Woman on the Jury and headed for the woods to work on a new play, was only deflected up the peninsula at the last moment. The sequel was a wholly delightful week-end spent fishing, boating and motoring over a uniquely beautiful countryside. Wisconsin has acted wisely in setting aside as a State Park a considerable area bordering the south side of Eagle Harbor. I know of nothing like it anywhere else in the Western Hemisphere.

Mr. Evinrude brought word of several volunteers who were anxious to rush on to sign up with me in various and sundry capacities for the rest of the voyage. One of these—an ex-Coast Guardsman and naval service man—gave some promise of qualifications that would have made him really useful in the work ahead. Glad as I would have been, however, for the presence of potential help in the event of a forced landing with a craft that I knew was too heavy for me to handle quickly alone, I was still unwilling to handicap the boat in rough water with any more weight than was absolutely necessary. Neither did I care to take on, sight unseen, a complete stranger. An eighty-foot schooner is all too small for two men so constituted as not to be able to look at work, play and life generally through pretty much the same eyes; a small open boat in like event could hardly fail to be one degree worse than hopeless. As a matter of fact, out of a score or more of friends with whom I would feel comparatively content in embarking upon an extended yachting cruise, I could number on one hand those with whom I would be optimistic of developments in shipping for a month in a small boat. So it was with neither qualms nor regrets that I declined the services of all further candidates for a crew.

I had expected to push off alone on Monday morning, the sixteenth, but another fine day and the prospect of watching one of his engines work out against a lively run of head seas with a heavy boat proved too much for Ole Evinrude to resist. So it was arranged that he should accompany me as passenger on the fifteen-mile run to Hedgehog Harbor, at the northern point of the peninsula, where Mrs. Evinrude and his son would go by road to pick him up for the return drive to Milwaukee.

We ran out into a light northerly head wind, with occasional gusts drawing down over the bluffs indicating that it would be met coming from the east beyond the peninsula in some strength. Any hopes I may have entertained of making Mr. Evinrude work his passage by giving me an intensive course of instruction in the idiosyncrasies of his little brain-child popping away on the stern were doomed to disappointment. Casually remarking that the motor was spinning like a top, the wizard of the outboard launched into a series of yarns anent the adventures attending the cruises of his old Bess Emily in the waters we were about to enter. They mostly had to do with clawing off lee shores in sudden squalls, banking over half-submerged reefs in the dark, and all the other odds and ends of intriguing little incidents that the yachtsman so loves to dwell upon in retrospect, especially for the edification of the young Ulysses who navigates locally for the first time. The gist of it all seemed to be that the north coasts of Green Bay and the islands thereof was no place for a forty-foot motor cruiser in anything but air weather. But as to whether or not they ever had fair weather nothing was said; the talk was all of foul.

"Nothing very cheering in that from the open skiff standpoint," I muttered dejectedly, all my former apprehensions about the inadequacy of my little shallop surging anew in visualizing the problems conjured up by the dismal recitals.

"Oh, that's all right," encouraged the veteran with an airy wave of his hand. "You just tilt your motor and get your whole outfit up on the beach before ever the storm reaches you."

That had been my own idea, too, but there was really very little comfort in being reminded of it just as we chanced to be coasting a line of white bluffs that fell sheer to the water for a hundred feet as far as the eye could reach in either direction. Perpendicular limestone walls, weather-worn to a surface slick enough to trip a fly, struck me as offering rather arduous landing conditions.

The Green Bay coast-line from Eagle Bluff to Porte des Morts is one of the finest scenic stretches to be found in all the Great Lakes. From one to two hundred feet in height, the bluffs through most of this distance rise straight from the clear, deep water which laps their bases. With two or three shallow bays offering some protection from storms from the main lake, the whole long line of bluffs is one of the worst places conceivable off which to be caught in a blow from the west.

Death's Door Bluff, which gives its name to the sinister Porte des Morts Passage, is the most northerly point of the Green Bay Peninsula. Its name originally appears to have been given in commemoration of an Indian legend, which told of a great fleet of Indian war canoes which were wrecked in a heavy storm while moving from the mainland to one of the islands in the lake at this point. Since the inauguration of navigation the rock-beset passage itself seems to have built up a tradition of its own, for the Lakes Survey Bulletin states that:

"It is known as Death's Door, owing to the numerous detached reefs and shoals obstructing its navigation, and the strong currents setting in or out according to the direction of the wind. The coast is rockbound and is almost certain destruction to crafts going ashore. These conditions have been the cause of many vessel disasters."

Death's Door made a flashing gesture of evil intent as we doubled its guardian bluff, but the gusty squall passed quickly and the short, broken seas stirred up by it died down rapidly as we headed east across Hedgehog Harbor and gained the lee of the hills running back from Table Bluff at the opposite side of the bay. At a quaint little cove that might have been transplanted bodily from the coast of Cornwall or Normandy or the Hebrides, we found Mrs. Evinrude and Ralph awaiting our arrival. With them was an ancient Scottish fisherman, so wrinkled and weather-beaten as to suggest that he might have pulled stroke-oar for the Ark in the pride of his youth. He was bristling with intimate personal reminiscences of the tragedies of Death's Door, where he said as many lives had been lost during the break-up of the ice in the spring as in shipwrecks.

The old fellow cackled with glee over the absurdity of my inquiry as to the possibility of getting a barometer reading before I shoved off, adding that he had all the weather-glass anyone could ask for right there in his bones. If it was a weather forecast I wanted, he could assure me that a wind was making over in the lake that would have the teeth of Death's Door laid bare right "doun to their gooms afore the mairn." There might even be a few breaths of loose air kicking round before night, he added, but hardly enough to keep a tight little craft like that of mine off the water, especiallly as I could make a lee of it most of the way round to the northeast corner of Washington Island. And, expressed in somewhat different language, those were practically the identical forecast and directions I received an hour later at the Coast Guard station on Plum Island.

Bidding good-bye to old and new friends, I refilled the tank of the motor and pushed off at eleven, for the first time alone. The boat rode appreciably higher without a second passenger, with a distinct improvement in the ease with which I could balance her in avoiding the invasion of beam seas. This became apparent as soon as I had passed out of the lee of Table Bluff and began to shoot athwart the short but ugly cross-seas driven in before the freshening southeasterly wind from the lake. An unexpectedly strong inward set of current gave added weight to the seas, and the last mile to the lee of Plum Island, with wind and waves coming dead abeam, the boat bobbed about right merrily. She took much less water than I had anticipated under such conditions, however, and speed appeared to suffer very little from the heavy rolling. It was a very encouraging start for the lone mariner part of my voyage.

Running along the west side of Plum Island, I cut a mile off the buoyed course to the Coast Guard station at the north-

(*Continued on page* 150)

SAFETY FIRST

THERE is safety, speed, beauty and technical perfection in a sea skiff cruiser by Banfield. Qualities obtainable only by years of experience, exactness of detail and strict adherence to owner's personal requirements.

Banfield cruisers are built in standardized models from 26 feet to 34 feet in length. Priced from $1,985 to $8,250, single and twin screw.

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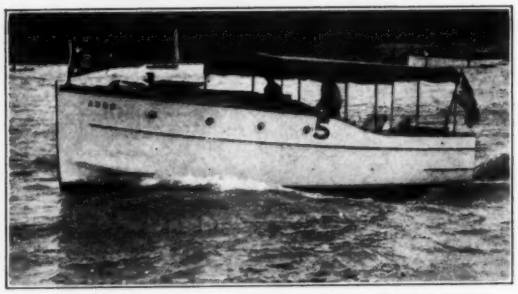

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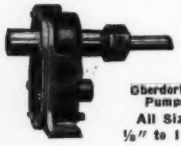

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Marine Horn $7.00.

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By Water Ways to Gotham

(*Continued from page* 148)

east corner by heading straight across a long shoal at a point where the old fisherman at Hedgehog Harbor had told me there would be just enough water to clear my propeller all the way over. This did not prove quite true, but as it was only soft sand that was bumped no harm was done. A few strokes with the oars sufficed to carry the boat on into deeper water, and five minutes later I was running in beside the station jetty.

Two of the guards came running down to help moor the boat and take me back to join them at their half-finished lunch. The Captain of the station was just packing up to leave on his summer vacation, but, with characteristic seaman's courtesy, postponed his departure for a half hour to go over the chart with me and discuss the route ahead. The rapidly falling barometer indicated a heavy storm from the lake beyond all doubt. As this might well hold me up for several days, Captain Moe agreed with me that it would be best to push on as far as possible before it broke. He suggested the lighthouse station of St. Martin's Island as a good strategic point to endeavor to make that afternoon. There was adequate protection available for the boat, and it would be a favorable place from which to take off for the long fifty-mile jump to Manistique, on the mainland of the north shore of Lake Michigan, the next good harbor on my route. In view of the gustiness of the wind, evidently the vanguard of the coming storm, he advised a safe but circuitous course that would take me close along the sheltered west and north coasts of Washington Island, leaving the jump across open water to St. Martin's Island to the last, and reducing it to less than ten miles. I could find shelter at a wood camp on the south shore of St. Martin's Island if it was too rough to run around to the lighthouse, while there were two good harbors on the north shore of Washington Island in the event I had to scurry to shelter earlier in the afternoon.

Unlike the weather preceding the semi-cyclonic disturbances of the second day of the voyage, the wind was now blowing from, rather than to, the quarter from which the storm was expected. It was still clear overhead, as well as to the north and west, but an opaque bank of haze to the southeast was slowly extending to blur the whole lakeward skyline. The lookout on the Coast Guard station watch-tower reported whitecaps on the main lake when I got under way again at one o'clock, but, sheltered by intervening islands and shoals, the water through which I ran for the first few miles was hardly more than rippled. Under the high bluffs of the west coast of Washington Island the clear green water was quiet as the surface of a millpond, and even when I rounded Bover Bluff and headed across the deep indentation of Washington Harbor there was little to indicate to anyone not highly sapient of local weather conditions how much air was really stirring in the open passage a few miles to the northward.

It was this Judas-kissing calm and the soft airs of the lee of Washington Island that lured me into shooting straight across for St. Martin's, a dull gray-green blur on the horizon thirteen miles to the northeast, instead of following Captain Moe's injunction of keeping in as close as possible all the way. The direct course would not only have the advantage of saving time and distance, but would also bring me to St. Martin's at a point from which it would be much easier to reach the light-station than from the landing at the southern side. This perfectly sound reasoning was eventually justified, but without altering the truth of the cardinal fact (which was probably best learned at bitter first-hand, anyway) that a broad, open passage already under the guns of an advancing storm is no place to venture with an open boat.

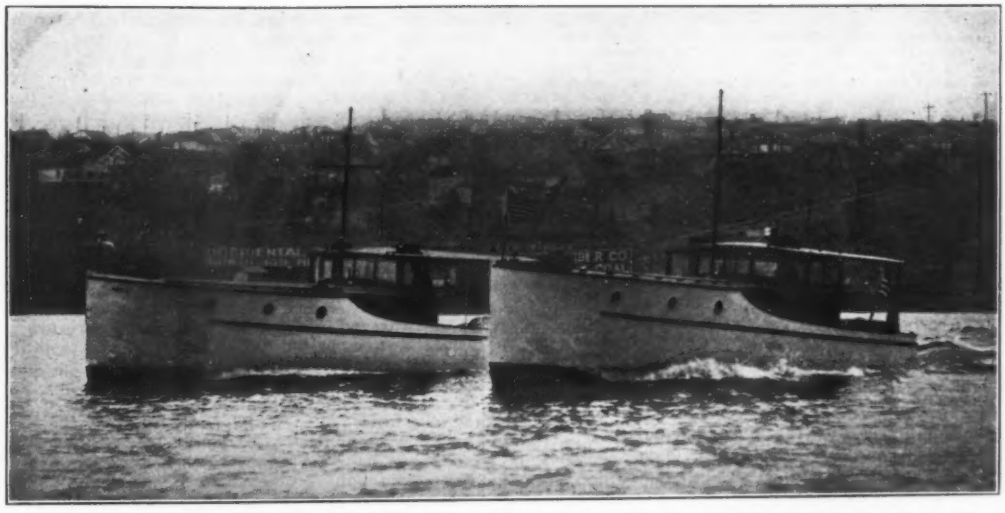
The increase of the force of the wind as I ran away from the shelter of the land was as gradual as it was unmistakable. Two miles out the crests of the steep, short waves were tipped with white, and not far beyond a good deal more than spray began to slop over the weather gunwale. As my northeasterly course brought the seas dead abeam, the spray-hood was of little use in keeping water out of the open after section of the boat; nor did throttling down speed help greatly. Running dead into the eye of the wind with a slow engine kicked up wild splashes of spray, but most of it was carried back over the stern. Running before the wind, though the boat yawed crazily in the unrhythmic seas, was dryer still. I tried them all just to get a bit of an idea how things would be in the event it became impracticable to hold on my original course. Then I unlimbered my big bailing bucket and headed for the slowly broadening lee of St. Martin's beyond the ten miles of open water still intervening.

A thirty-foot cabin fishing launch, hastening to take in its nets before the storm broke, gave me the first idea of how rough it really was. With only a knot or two of way on, she was

(*Continued on page* 152)

Advertising Index will be found on page 166

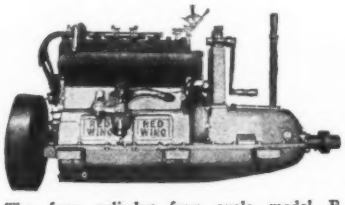
Red Wing Thorobred
THE MOTOR WITH POWER TO SPARE



A pair of elegant 36-foot standardized cruisers built by the N. J. Blanchard Boat Co., Seattle, Wash. These boats travel at a real 12 mile per hour clip with their model B 32-40 H.P. Red Wing THOROBRED powerplants.

A PERFECT TRIP AHEAD WITH A THOROBRED MOTOR

ALL aboard for that carefree trip where dusty roads are left behind, and the endless procession and din of traffic are forgotten in the restful invigoration which only boating affords. And if your boat is powered with a Red Wing THOROBRED marine engine, there is a perfect trip ahead at every start, and no place you cannot go but with the assurance of a safe return.



The four cylinder four cycle model B 32-40 H.. THOROBRED unit powerplant. Bore 4½", stroke 5". Has built in reverse gear and pressure feed oiling system.

Nor is this perfect Red Wing performance limited to any one type of boating. Both large and small cruisers as well as the popular runabouts, houseboat yachts, commercial boats, auxiliaries and tenders can be powered with a Red Wing exactly suited to its particular requirements, each possessing the well known THOROBRED characteristics of absolute reliability, endurance, velvety smoothness of operation and continued satisfaction. Yes—boating is a step in the direction of health and real happiness, and when you install a Red Wing THOROBRED powerplant you eliminate the experimenting and start solid enjoyment of boating from the very start. Let us tell you about the Red Wing that will fit in with your plans. Write us today.

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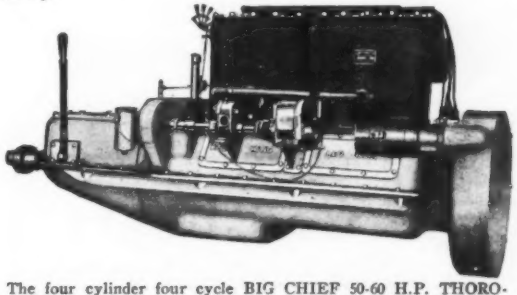
Model K 4-5 H.P. 1 cyl. 3¼x4¼
Model KK 7-8 H.P. 2 cyl. 3¼x4¼
Model D 10-14 H.P. 4 cyl. 2¼x4
Model AA 18-24 H.P. 4 cyl. 3¼x4¼
Model F 28-36 H.P. 4 cyl. 4 1/16x5
Model B 32-40 H.P. 4 cyl. 4½x5
RED TOP 40-50 H.P. 4 cyl. (high speed) 4½x5
BIG CHIEF 50-60 H.P. 4 cyl. 5-7
BIG CHIEF SPECIAL 75-90 H.P. 4 cyl. 5¾x7

Medium heavy duty or high speed types. All four cycle.



The four cylinder four cycle BIG CHIEF 50-60 H.P. THOROBRED, bore 5", stroke 7"; and the BIG CHIEF SPECIAL 75-90 H.P., bore 5¾", stroke 7"; with FIVE bearing crank shaft of 2⅝" diameter, complete pressure feed oiling system, Paragon reverse gear running in oil, double ignition, and electric starting equipment with enclosed balance wheel. Ideal for cruisers, commercial boats and passenger craft. Furnished in gray iron or aluminum types.

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A space-saver in the cabin or on deck.
Diameter of seat, 11"
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Finished in oak or in mahogany or birch
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Write for our special catalogue on our complete line of steering gears, universal struts, running light equipment, etc.

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Send for complete catalog.

Cape Cod Ship Building Corp.
Wareham, Massachusetts

By Water Ways to Gotham

(*Continued from page* 150)

rolling rails under in the trough, with spray occasionally flying right over the deck of her high glassed-in cabin. She had evidently been a pleasure craft at one time, and of a design far from well adapted to the lowly work in hand. The fishermen were genial souls, and especially nice in the considerate way they refrained from seizing the opportunity to launch a flock of solemn warnings about the coming storm. One of them had a pleasant sort of a dry wit, though. When I responded to his hail of "Whereaway, matey?" with a laconic "New York," he shook his head and roared back that the weather didn't look favorable for making that port before dark. And another was a merry wag. When I asked, with a fine show of nonchalance, if the wind ever blew thereabouts, he replied that it "puffed away tolab' sma't" when it got its dander up, adding that, of the last launch he had wrecked, the engine was the only part that was found on the beach.

"And what became of the rest?" I asked quite naturally.

"All that was left o' the hull an' uppa-wuks we salvaged from the trees at the top of the bluff," he replied, laying back another layer of net along the pile on the bobbing stern.

But the good fellows were quite serious and sensible when, in similar mood, I asked what they thought of pushing on to St. Martin's. They would really welcome the chance to take me home with them to Jackson's Harbor, they said, but, since there was nothing in the next five miles worse than I had banged through for the last five, there was no reason why I should lose a day or two by departing from the most direct course. And quite right they proved to be. A little work with the bailing bucket every time the bilge began to swish about my ankles kept the water from rising to a dangerous level, and that was about all there was to it. Just as soon as I was well past the middle of the passage, indeed, and knew that I was wallowing along very comfortably through the worst of the welter, the thing was really good fun; also distinctly heartening in uncovering qualities of seaworthiness in both boat and engines beyond my highest hopes for either. Confidence in my ability to avoid or ride out the worst the dread north coast of Lake Michigan had to offer in the weather line was pegged several notches higher by the time my drenched but buoyant little craft slid into the quiet green waters of the sheltered lee of St. Martin's. And the exaltation of high-pegged confidence is not conducive to the state of mind necessary for conservative navigation. That truth had been brought home to me a score of times in running river rapids; it was rather silly to have to learn it all over again on a lake.

The sun-brilliant bit of seascape flashing into view as I rounded the northwest point of St. Martin's seemed for an instant as though lifted bodily and transplanted from the South Pacific. Both color and form conspired to compass the illusion. It required slight stretch of the imagination to see in the loop of white limestone beach a shining strand of coral clinkers, in the white and red light-house buildings a mission or trading station, in the wind-stripped trees on a jutting point a patch of feather-topped coco palms, and in the combers breaking on the shoals of the low Gull Islands a South Sea surf thundering on a barrier reef. The tropical seeming faded as the eye searched for details, but the first vivid vision had been so real as almost to bring the perfume of *frangipani* and *tiare Tahiti* on the wings of the gathering gale.

Running in past a long-deserted fishing village, with its sagging-roofed houses and rotting docks, I landed at the slip of the boat-house of the light-house station. The bronzed, broad-shouldered chap who dropped a paint brush to come down to greet me had a familiar look, which was explained when he introduced himself as Dave Kincaide, brother of the Captain of the Milwaukee Coast Guard station. With the bottom dropping out of the barometer, he said I might just as well reconcile myself to a stop of two or three days. He regretted that there was no sleeping room for me at the station, as his family from Washington Island was paying him its annual visit; but the boat-house was at my disposal for myself as well as my boat. His own launch, for convenience, was kept on the other side of the island. My suggestion that the boat would probably be all right if drawn up a few feet inside the narrow slip brought a chuckle and grin from both the veteran keeper and his assistant. Pointing to a line of driftwood well back toward the wall of the forest, Kincaide explained that a hauling of the storm to the northeast would be likely to send everything but the native bedrock underlying the beach up to join it. With that graphic example of a 'nor'easter's wrath before me, I was only too glad to have my shallop floated onto the car of the little marine railway and hauled up by windlass into the boat-house.

(*Continued on page* 154)

Advertising Index will be found on page 166

The AUTOPULSE is a magnetically controlled fuel supply unit which draws the gasoline from the supply tank and delivers it to the carburetor by the pumping action of a brass bellows, energized from the battery. Output is controlled by carburetor float valve—rated capacity of a unit is eight gallons per hour, with a maximum capacity of twelve gallons per hour. The AUTOPULSE is built in one size only, and is supplied for operation with six or twelve volts. If additional pumping is required, two or more units are connected together in parallel. It is the only device of its kind that will expose a faulty condition in the fuel line.

A Chris-Craft on the Detroit River. These famous boat builders have adopted the AUTOPULSE as standard.

SCRIPPS MOTOR
COMPLETE MARINE POWER
CHRIS SMITH & SONS BOAT COM.
ALGONAC, MICHIGAN

March 3, 1925.

Ireland & Matthews Mfg. Co.
Detroit, Michigan.

Gentlemen:

After considerable experimenting last fall with the Autopulse system for transferring gasoline from the tanks in the rear of the boats to the carburetors, we have decided to adopt same as standard equipment on our Chris-Craft.

We were very much impressed with the simplicity of this outfit. The fact that there are so few connections or same eliminates the possibility of flooding as there is with a pressure float leaking there is no flooding as there is with a pressure system or vacuum tanks, although in our Chris-Craft we have made provision for this with drains overboard. The Autopulse is more practical.

Yours very truly,

CHRIS SMITH AND SONS BOAT COMPANY.

JWS:GS.

Accepted

Since the introduction of the AUTOPULSE, less than a year ago at the Gold Cup Regatta, it has been generally accepted as standard by the marine industry. Its compactness, dependability, ease of installation, freedom from complicated pipe lines, and above all its practicability have won the approval and good will of engine manufacturers, boat builders and boat owners.

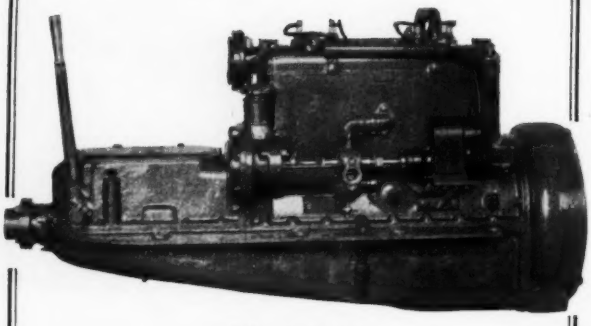
The AUTOPULSE Fuel Supply System fills a long felt want in the marine field and its unanimous acceptance by the industry is proof of its efficiency.

There is a great replacement field for this product—some valuable territory still open.

Ireland & Matthews Mfg. Co.

1500 Beard Ave. **Detroit, Mich.**

A New
MIANUS
GASOLINE ENGINE



Model 44
4 Cycle—4 Cylinder

25-40 H.P.

Now Ready
for Delivery

Write for Bulletin M.

MIANUS DIESEL —AND— GASOLINE ENGINES

MIANUS DIESEL ENGINE CO.

FACTORY: STAMFORD, CONN.
GENERAL OFFICES: 165 BROADWAY, N. Y.

BRANCHES:
NEW YORK BOSTON BALTIMORE
NORFOLK LOS ANGELES

By Water Ways to Gotham

(*Continued from page* 152)

Suppering bountifully at the table presided over by Mrs. Kincaide and her daughter, I sat late into the night listening to the keeper and his two assistants spin yarns of the years spent in buffeting with the summer and winter storms of the treacherous Porte des Morts Passage and its equally grisly vestibules among the islands to the north. One of the last tales had to do with Kincaide's fight with a giant timber wolf, which had crossed from the Michigan forests on the winter ice. Phantom wolves chased me all the way back to my bed in the boat-house after that, and then sat down to howl outside. An hour or so after midnight their ululations were drowned in the roar of artillery—the batteries of the storm opening up in what proved to be an astonishingly earnest endeavor to blow the boat-house off the face of the island. Fortunately the cunning Government architects had contrived to anchor the squat little building against just such an onslaught, so that the only serious casualty revealed by the stormy dawn was Keeper Kincaide's freshly spread layer of white paint.

(*To be continued*)

[*The next chapter of Mr. Freeman's story in July MoToR BoatinG will recite some of the history of pioneer navigators on the Great Lakes. Its very title, On the Tracks of the Voyageurs, will carry you back to those hardy explorers who were the first white men to travel about in the wilderness of water several hundred years ago. With the birch bark canoe and a rifle, they spent months of time in forcing a passageway across the lakes and rivers of the West. The history of their trips and the hardships they endured, will make an interesting sidelight on Mr. Freeman's voyage. In continuing his cruise after being storm-bound at St. Martin's Island for several days, he encounters another form of Great Lakes weather in the form of a heavy fog. The problems of handling a small boat under such conditions is increasingly difficult, and an unreliable compass almost causes an abrupt end to the cruise. Safety is finally ffound in the harbor of Manistique where another stormy spell is passed in security.*—EDITOR.]

A. C. Houser With A. G. Griese, Inc.

In a season which has been marked by a good many changes in the industry, no announcement has been of greater importance than that which concerns the association of Arthur C. Houser with A. G. Griese, Inc., of 331 Madison Avenue, New York City. Mr. Houser took up his new duties on April 1. He will, for the present, at least, give up the major part of his attention to the sales of Speedway Marine Motors, which have been handled with marked success by the Griese organization for several years.

Mr. Houser is known throughout the boat industry through his connection with the Buffalo Gasolene Motor Company for over twenty years, during the greater part of which period he was Sales Manager. The organization of the Buffalo Sales and Service departments to their present state was largely the work of Mr. Houser, and in this he has exhibited an ability of highest order. His experience and knowledge of conditions should produce results in his new connection by increasing the sales of the Speedway models to a new high point.

Not alone in the Marine Motor field, but also in various industrial lines has Mr. Houser been successful. He developed new outlets for the Buffalo motors in fields where the sturdiness and unfailing reliability of the Marine type motor are applicable.

His knowledge of Marine motors, of boats, and of the requirements of boat builders and boat owners will be applied to creating further popularity for the Speedway line.

The connection with A. G. Griese, Inc., seems a fortunate one. Mr. Griese, for many years recognized as one of the ablest merchandisers of Marine Motors, has built up an organization eminently capable of handling such outstanding motors as the Speedway and the Winton, each of distinct class. The business has met with unusual success because of aggressive sales methods and thorough service policies. The addition of a man of Mr. Houser's qualifications is a logical move in the direction of expansion of the business.

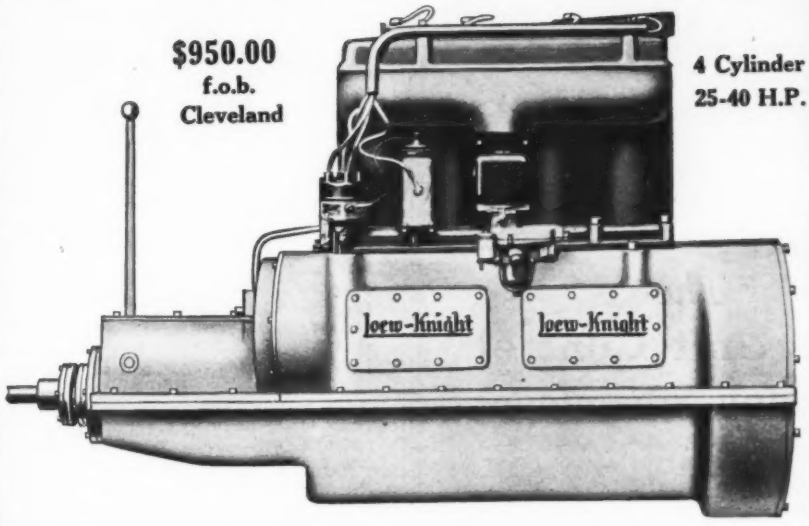
Besides his business activities, Mr. Houser has been identified with boating at Buffalo and has always been active in racing and yacht club affairs. Since coming to New York he has been spending much of his time at the Speedway Plant at Morris Heights to gain complete familiarity with the building of the motors.

No announcement has been made up to the present time as to Mr. Houser's successor with the Buffalo Gasolene Motor Company.

Advertising Index will be found on page 166

$950.00
f.o.b.
Cleveland

4 Cylinder
25-40 H.P.



A New and Keener Pleasure

You will find a new and keener pleasure in your yachting or motor boating when your engine is a Loew-Knight. Here is a decidedly different gasoline engine—because it has sleeve valves—a fundamental, advantageous difference in favor of the Loew-Knight. No valves to grind. No carbon to remove. The only marine engine that improves with use. Sizes—25 H.P. to 300 H.P. Write today for details.

THE LOEW MANUFACTURING CO.

Sole Licensee and Manufacturer of Knight Marine Engines
EARL H. CROFT, Sales Division
9004 Madison Avenue, N. W.
CLEVELAND, OHIO, U. S. A.

Loew-Knight

The
Elgin Unit Control Has Many Advantages

THE paramount advantages of the Elgin Unit Control are, beauty, compactness, simplicity of installation, clearer visibility and better service. With all essential instruments under one glass, indirectly illuminated, it gives at a glance an accurate reading of the power plant's performance and condition.

The elegance of the Elgin Unit Control harmonizes with the boat's appointments. Its compactness makes the dash "plastered" with instruments a fashion of the past. Instruments of the Elgin Unit Control include: Elgin Chronometric Tachometer, Ammeter, Oil Pressure Gauge, Motor Temperature Gauge and Air Gauge for gasoline line. Its installation requires but a little more time than is necessary to install any single instrument.

The Elgin Unit Control is standard equipment on Belle Isle Super Bear Cats and Biscayne Baby speed boats.

If you are building a new boat or having an old one modernized—specify Elgin Unit Control.

For Detailed Specifications and Price Address

TACHOMETER DIVISION
Elgin National Watch Company
86 E. Randolph St. • Chicago, U. S. A.

Miami One-Design Boats

(*Continued from page* 45)

The Gold Cup Regatta proper will start on Saturday, August 29. At 1.15 p. m. the first race for the Miami one-design class is scheduled. The boats which will race in this class are similar to those which raced at the recent regatta at Miami Beach, being driven by automobile drivers which were brought to Florida from the Pacific Coast, by Carl G. Fisher, especially for this race. Mr. Fisher has ordered twenty new boats for this class and it is certain that at least ten of these will race at Manhasset Bay and perhaps a greater number. The boats are all alike and are powered with six cylinder, 100 H.P. Scripps' motors. After the Manhasset Bay race the boats will be sent to Miami Beach where they will compete next winter.

At 2:00, on Saturday, August 29, the first heat for the famous Gold Cup will be held. This will be a race of thirty miles in length. Already a greater number of challengers for the Gold Cup have been received than competed last year. So it will be seen that a spirited race is assured.

At 2:50 p. m. the second heat for the Miami one-design boats will be held and at 3:30 o'clock the second heat for the Gold Cup will be run off. At 4:00 p. m. an invitation race for Baby Gar runabouts will be held, and as all of these boats are capable of better than fifty miles an hour this race will be the first time that Easterners have seen a number of fifty-mile boats in action.

At 4:45 the third heat for the Gold Cup is scheduled, and at 5:45 a Free-For-All Race for displacement runabouts will be started. This event will be 24 miles in length and is open to all displacement craft, irrespective of their size or power.

On Sunday, August 30, there will be racing activities from 10:00 in the morning until sundown. The first event will be a race for boats with outboard motors. The boats will be divided into at least three classes and will race for three miles. At 10:35 an aquaplane race of one-half-mile in length is scheduled and at 11:00 the Truth Race will start.

The Truth Race is an event of not over ten miles in length and is open to all craft irrespective of their power. Hydroplanes, cruisers, runabouts or even boats powered with outboard motors may compete in this race. Previous to the start of the race, each owner who is entered in the event, must report to the Race Committee and inform the Committee of the maximum speed his boat is capable of. The exact length of the course will be unknown to the contestants but known to the committee. The boats will all be started together and race around the course designated by the committee but announced by them just previous to the start of the race. The finishing time of all boats will also be taken and from this data their speed will be computed by the committee. That boat whose actual speed in the race comes nearest to the speed specified by the owner will be declared the winner. In other words, the truth of the owner's statement as to his boat's speed will be checked and verified in the race and the owner who has come nearest to telling the truth will be declared the winner.

On Sunday, at 12:00 noon, at 1:20 o'clock, at 2:20 and at 3:20 o'clock, twelve-mile heats for the new trophy recently presented to the American Power Boat Association by Horace E. Dodge, in memory of his father, will be raced for. At 12:35 the third heat for the Miami one-design class is scheduled, and at 3:50 the fourth heat of these boats will take place.

At 1:50 and 2:50 o'clock will be held the two heats for the 151 cubic inch hydroplane class of the Mississippi Valley Power Boat Association. Already ten entries have been received for this race, and it looks as though there might be fifteen starters in this class.

At 4:30, on Sunday afternoon, is scheduled one of the most important races of the whole Regatta, the event for the International Trophy, presented to the American Power Boat Association by the National Association of Boat Manufacturers. This race is scheduled for 105 miles in length.

The headquarters of the Gold Cup Regatta Committee in New York will be at the Hotel Belmont, where all entries should be sent or information obtained.

Other important Regattas of the year include the Annual Regatta of the Miles River Yacht Club, scheduled to take place at St. Michaels, Maryland on August 7 and 8. The Annual Regatta at Detroit, Michigan, will be held on September 4-7, and the annual races of the Ohio Valley Motor Boat Association are scheduled to take place at Cincinnati, Ohio, September 4-7.

A complete summary of the racing scheduled for 1925 will be found on page 47.

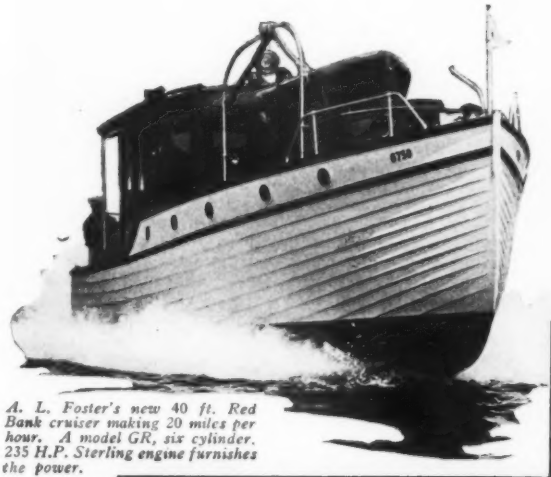
The committees appointed to handle the various race details are as follows:

Executive Committee—F. R. Still, Chairman; Fred. Berg, Vice-Chairman; Caleb S. Bragg, Vice-Chairman; Ira Hand, Treasurer; Henry Clay Foster, Secretary; C. F. Chapman,

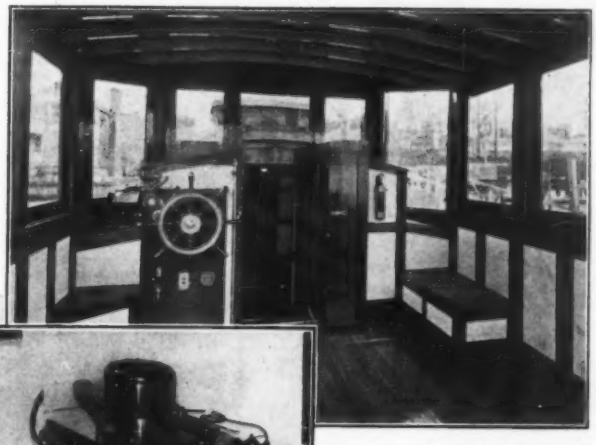
(*Continued on page* 164)

Advertising Index will be found on page 166

A New Fishing Boat



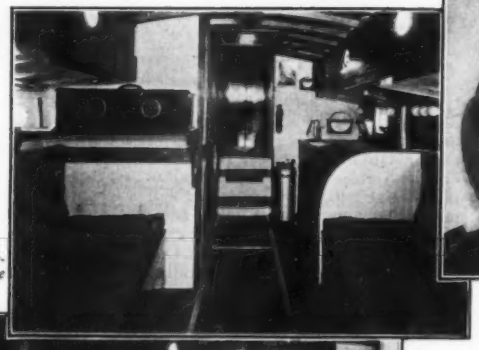
A. L. Foster's new 40 ft. Red Bank cruiser making 20 miles per hour. A model GR, six cylinder, 235 H.P. Sterling engine furnishes the power.



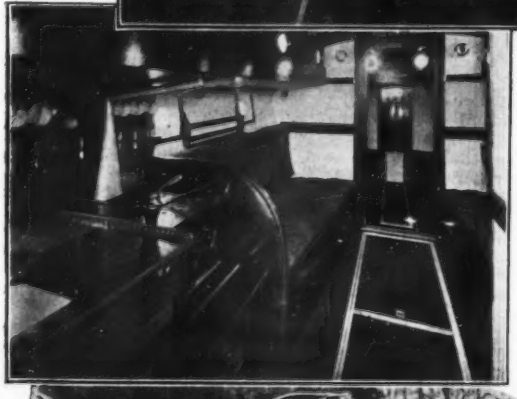
The bridge, large and roomy. Power plant is underneath.

Electric lighted throughout. The Delco lighting plant also generates the power for operating the anchor hoist and bilge pump.

Looking aft in cabin.



Below. Looking forward in the cabin.



N this 40 ft. Red Bank cruiser and fishing boat the accommodation restrictions of the small boat have been surmounted, and the maintenance problems of the large yacht have been avoided. Yet, the accommodations are complete and well arranged for the enjoyment of wholesome comfort, while the equipment and machinery are of the best type for increased efficiency and greater economy in boating.

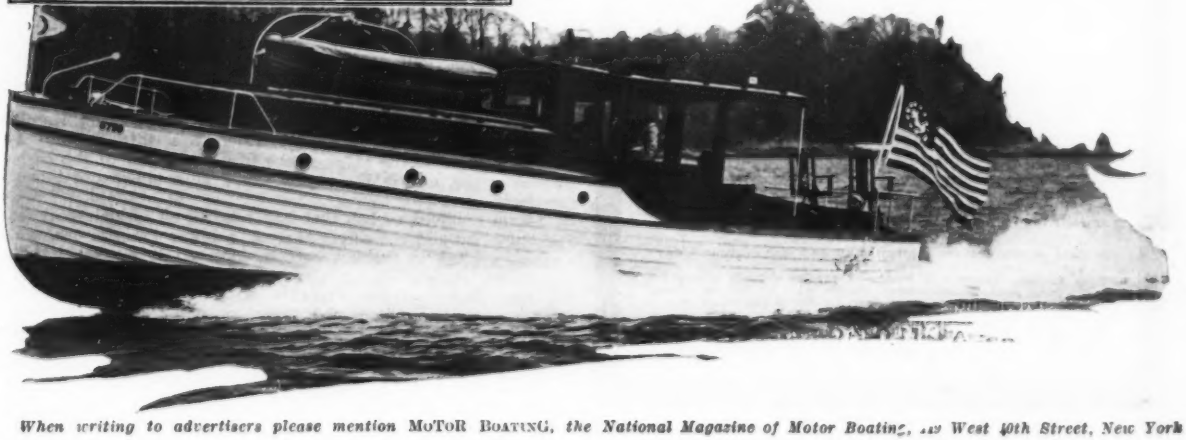
The exceptional advantages offered by the modern facilities of our plant and yard are reflected in the quality and low cost of Red Bank boats. Write us for a quotation on the type of boat you are interested in.

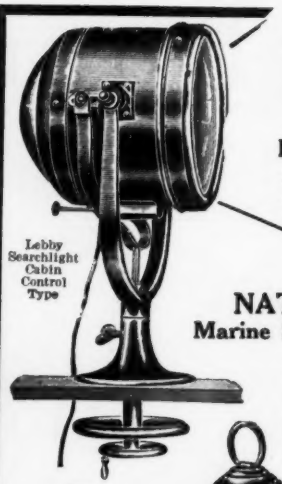
RED BANK YACHT WORKS

PIERRE A. PROAL, *President*

Red Bank **New Jersey**

Telephone: Red Bank 840





Lebby Searchlight Cabin Control Type

LEBBY

TRADE MARK REG. U.S. PAT. OFF

Incandescent Searchlights

are absolutely guaranteed to project more beam candle power than any other incandescent projector on the market. Manufactured of solid brass throughout. Finished in either polished brass, battleship gray, nickel plated or black nickel.

NATIONAL
Marine Sailing Lights

These lights are approved types and are more efficient than other makes. Lights equipped with our TRIPLEX LENS have the most powerful fresnal lens made. We also manufacture an extensive line of electric fixtures.

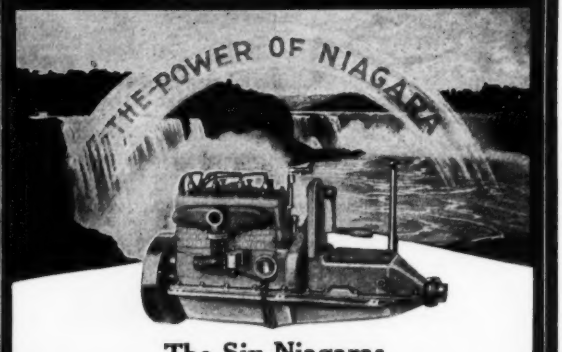
Write for catalog

Champion Stern Light Class I and II

No. 521 Triplex Side Light

No. 768 Single Wall or Bulkhead Fixture with Turn Switch, Ediswan base receptacle.

NATIONAL MARINE LAMP CO.
Forestville, Conn.



The Six Niagaras

LOWER initial cost, lower maintenance cost, longer life, sturdier construction, sounder engineering principles and greater adaptability put Niagara Motors well in advance of marine engines of equal size and power.

NIAGARA MOTORS
All four cycle type

Niagara Gem	5 H.P.	for boats up to 20 feet
Niagara Special	15 H.P.	" " " " 32 "
Model E-2	14 H.P.	" " " " 35 "
Model E-4	30-35 H.P.	" " " " 40 "
Model D-4	60-80 H.P.	" " " " 55 "
Model D-6	100-120 H.P.	" " " " 75 "

All of these models have an established reputation of reliability and durability as well as ease and quietness of operation. Each delivers its full rated power without strain or faltering.

Write today for catalog
State power you are interested in and size of your hull

Boat Builders, Dealers and Agents—A popular motor is always the best seller. Niagaras are popular. Write today for full particulars. See our advertisements on pages 86-144 of this issue.

NIAGARA MOTORS CORP.
Dunkirk Box 300 New York

Keeping Carbon Down

(*Continued from page* 40)

the firing chambers. The partially closed throttle produces an abnormal vacuum during the suction stroke, hence the excess oil in firing space.

The simplest and most satisfactory arrangement to keep down the carbon jinx is in use on the cruiser Edna M 11, which is illustrated in the sketch herewith. It consists of a ⅛-inch pipe connection tapped into the waterjacket (in this case, tapped into the exhaust manifold jacket), and fitted with a needle valve so located that it drips hot water past the carbureter air intake. Naturally the waterjacket can be tapped only in such cases where the boat operates in fresh water. Where the boat travels in salt water, the same scheme can be used, but a small tank must be substituted to provide a fresh water supply. This can be renewed from time to time, and only a few gallons will be needed for a day's run. When the motor is running, the falling drop of hot water is drawn into the carbureter along with the in-rushing air and broken up into a mist, which is not only effective in oxidizing carbon deposits, but makes a smoother running motor. The effect of damp moisture-laden air is too well known to the average motor boatman to need any further explanation here.

After five years of running, the motor was taken down and scarcely a tablespoonful of carbon was scraped from the entire four cylinders, while the piston rings were loose and bright.

W. E. M., Philadelphia, Pa.

Water as a Carbon Retardant

IT is a well known fact that it is not possible to operate an internal combustion engine for any length of time without some carbon forming on the combustion chamber walls and on the piston-head and valves. The causes are many and real remedies few. The fault does not, as we are often led to believe, lie entirely with the fuel and lubricating oil used. The mechanical condition of the engine is the controlling factor in carbonization. An engine in which the pistons do not fit properly and the rings leak and allow oil to work up past them into the combustion chamber will carbonize very rapidly, no matter how good or suitable for that particular engine the oil may be. A properly adjusted carbureter and a good hot spark tend to prevent rapid carbonization through more complete and rapid combustion, which naturally leads to an economy of fuel and oil. The operating temperature of the engine also has a bearing on the rate of carbonization. You will recall smoking glass for the eclipse and how the cold glass cooled the gases of the flame and caused a deposit of lamp black to collect on the glass. Had the glass been as hot as the flame, very little deposit would have been left. This same theory works out in the engine that is operating too cold, most of the carbon being found on the coolest part of the combustion chamber, walls. Therefore, run the engine at a temperature that will keep the cooling water at a temperature just below that of boiling water. Much can be accomplished by paying strict attention to the mechanical condition of the engine, carburetion and ignition.

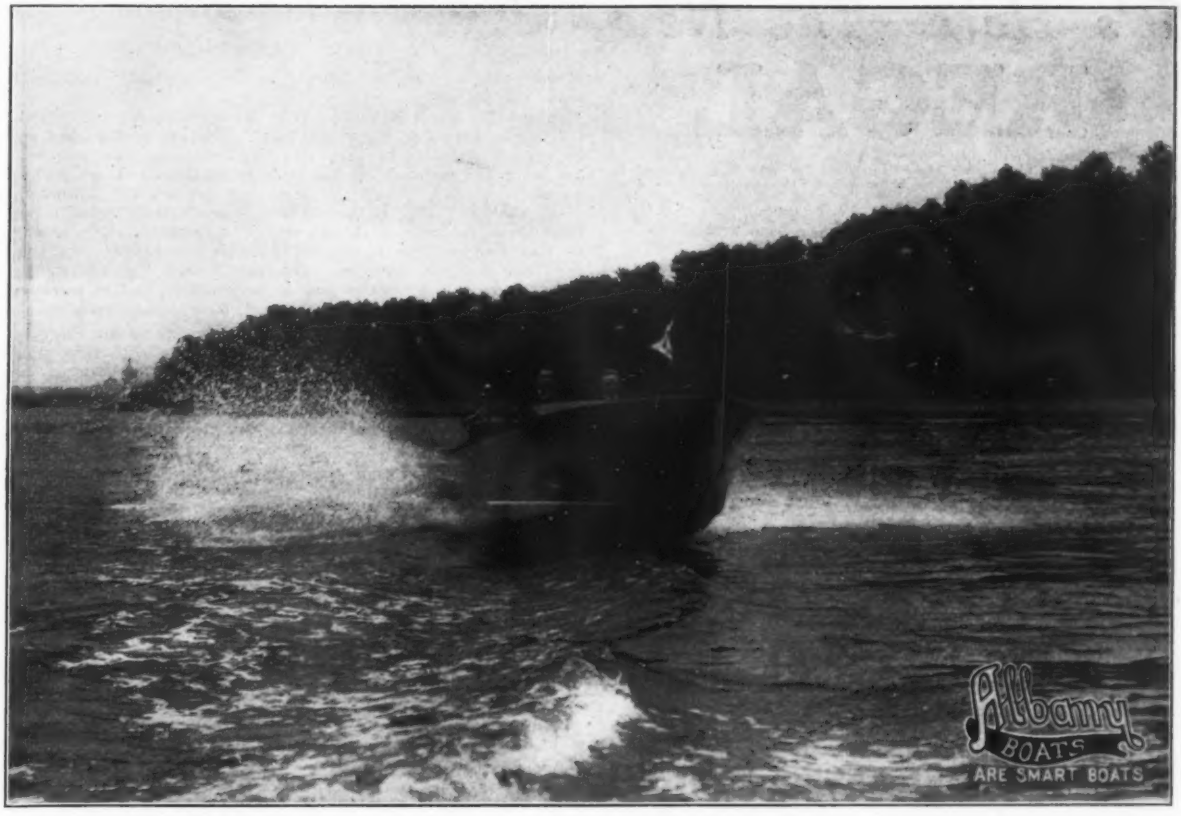
Liquid carbon retardants which are to be mixed with the fuel in given quantities are least troublesome to use, and their continued use will reduce the deposits already present and retard the rate of formation with apparently no other affect on the engine.

Water is a good carbon remover and retardant. The following experiment, which you can repeat with improvised equipment, was made under conditions approximating those in the cylinder of an internal combustion engine, to demonstrate the action. Gas engine oil was distilled in a closed tube until no more vapor passed off, producing a condition similar to that in the engine. Then steam was passed through the tube while the heat was maintained at a red heat where the torch flame played against the sides. The carbon on the cooler portions of the tube was unaffected but that on the hottest part was entirely consumed. Then liquid water was thrown onto the heated carbon on the sides of the tube and much of the carbon was loosened, and in the engine would have blown out through the exhaust.

Steam removed carbon that had reached an incandescent temperature but did not affect that at a lower temperature, while water, applied to the hot carbon, loosened it so that it could be blown away. The greater part of the carbon in the combustion chamber never reaches an incandescent temperature under normal conditions and, therefore, is not affected by steam. However, before being deposited from the burning charge, the carbon is finely divided and incandescent. Kerosene, denatured alcohol, and some of the patented carbon removers were tried

(*Continued on page* 160)

Advertising Index will be found on page 166



Albany Twenty-Six Foot Runabout

Albany Cruisers are of the V bottom type. The V bottom construction is stronger, more stable in a sea-way and much faster than the ordinary construction. The higher speed increases the cruising radius and makes possible a much longer cruise in the same time.
Albany Cruisers bear the same relation to ordinary boats that the high powered automobile bears to an ordinary car.

ALBANY RUNABOUTS are designed to make touring on the water as comfortable and practical as touring on land. Not only is this accomplished, but the exhilaration and keen enjoyment of high speed on the water involves a pleasure that is not possible in any other form of rapid locomotion.

The self-starting motor, positive controls, and deeply cushioned seats, offer the best that can be obtained for water touring.

The 26′ mahogany runabout, Model R-26, with 90 horsepower 6 cylinder engine, has a speed of 30 miles per hour. It will carry 9 passengers.

Our Complete Line of Boats is as Follows:

26 foot open Fishing-boat.
26 foot Runabout—speed 30 miles per hour.
26 foot Runabout Special—speed 40 miles per hour.
34 foot Runabout—speed 30 to 55 miles per hour.
36 foot Cruiser—speed 15 to 25 miles per hour.
40 foot Cruiser—speed 15 to 30 miles per hour.
45 foot Cruiser—speed 15 to 23 miles per hour.
52 foot Cruiser—speed 15 to 22 miles per hour.

Write today for illustrated literature descriptive of this runabout, or any of the other Albany boats listed above.

Distributed Exclusively By

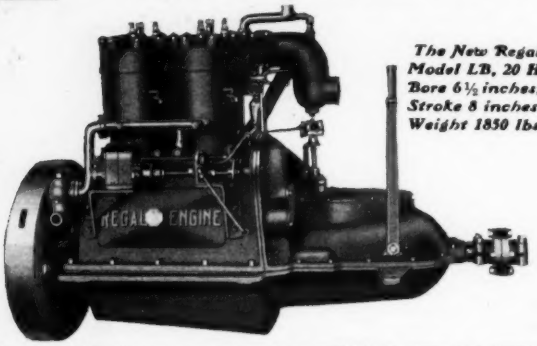
YOUNG and HALL, Inc.

WILBUR H. YOUNG LOUIS J. HALL

522 Fifth Avenue, Phones: Murray Hill 8160-8161 **New York City**

It's Here—The New REGAL

OWNERS of boats whose power requirements demand a heavy duty engine of 20 H. P. will be especially interested in the new REGAL. It is designed along the most advanced engineering principles and has many exclusive features. This engine is not in any sense an experiment. It is a thoroughly tried engine of proven success, having been tested under the most severe conditions that any marine engine can be put to. In every way it proved thoroughly reliable and showed unusual endurance.



The New Regal—Model LB, 20 H.P. Bore 6½ inches; Stroke 8 inches. Weight 1850 lbs.

Force feed lubrication to all wearing parts is provided by means of a dependable gear driven oil pump. The reverse gear is enclosed in an oil tight housing and is accessible through removable cover plate. Large hand hole plates on crank-case permit easy and convenient inspection of all bearings. This model is built for either double or single ignition.

There are seventeen other REGAL models ranging from 2 to 100 H. P. Write today for details and prices.

Inquire about REGALITE, a ¾ KW air cooled electric lighting plant for boats, houses, stores and isolated buildings.

REGAL GASOLINE ENGINE COMPANY
74-82 West Pearl Street Coldwater, Michigan

WOOLSEY'S PAINTS & VARNISHES

Tungspar Varnish

A Varnish for use in marine work or other purposes, either exterior or interior.
Will not turn White.
Is not affected by water, either fresh or salt, hot or cold, nor by climatic changes.
Cannot be equalled in quality.
Is on a par with Woolsey's other renowned Marine Products.
Use Also—**Woolsey's Yacht Whites, Adamant Deck Paint or Copper Paints** and be assured of complete satisfaction.

Quality Products Since 1853

C. A. WOOLSEY PAINT & COLOR CO.
JERSEY CITY NEW JERSEY, U.S.A.

"GOLD MEDAL"
TRADE MARK REG. U.S. PAT. OFF.
FOLDING FURNITURE

For 33 Years the Recognized Standard.

Gives Home Comfort "Aboard"

This new Yacht chair, designed especially for Motor Boat Use, insures complete relaxation and rest. Its stylish lines, handsome mahogany finish, khaki seat and back, and brass metal parts harmonize with appointments of finest cruisers on deck or below. As *all* metal parts are brass, it defies salt water. There is a piece of "Gold Medal" Folding Furniture for every purpose.

Sold by reliable dealers everywhere. Write for name of one nearest you and handsome illustrated catalog.

No. 25Y Yacht Arm Chair

Hardwood frame, all metal parts brass. Folds to 26¼" x 16½" x 8". Weight only 14½ lbs.

Gold Medal Camp Furniture Mfg. Co. 1754 Packard Avenue, Racine, Wis.

Water as a Carbon Retardant

(Continued from page 158)

in the same manner and the results were no better than with plain water.

From the above experiment the conclusion can be drawn that steam or water vapor will not loosen the greater part of the carbon deposits, or that part which does not get red hot, but will, if mixed with the charge in sufficient quantities, oxidize the finely divided particles and prevent the formation of deposits. Water in its natural state introduced into the combustion chamber of a hot engine will loosen the deposits so that they will be blown out through the exhaust. Water does not combine with the carbon to loosen it. The action seems to be that the water gets in between the carbon particles and, upon being vaporized by the heat, loosens the deposits.

Many years ago it was found, upon examining an old type multi-cylinder engine having separate cylinders with removable heads, that one cylinder contained much less carbon than any of the others. A leaky gasket, which allowed water to seep in while the engine stood idle, was the cause. If water alone is run through a hot engine, clouds of carbon will be seen issuing with the exhaust.

The claim that water in the form of steam or vapor admitted to a hot engine with the fuel charge will increase the power is greatly over-estimated. It is claimed that the water is broken up into its elements, hydrogen and oxygen, and that the oxygen thus liberated combines with the fuel vapor and increases the power. It is true, that at the high temperature of the initial part of the explosion, before the gases have cooled by expansion, part of the water will be decomposed. But since the heat evolved during a chemical reaction is always equal to the heat absorbed when the action is reversed, it follows that the heat absorbed in the decomposition of the water will cool the gases slightly, thus lowering the initial pressure to a point that will offset any gain that might be accomplished by the liberated oxygen supporting combustion. The heat loss, if any, is negligible against the advantages of a clean engine, free from carbon.

The methods of administering the water in both the liquid and vaporous state have been many and widely varied. Authorities differ as to the most effective method as well as the point of admission. For washing out the engine, it would seem that directly into the intake manifold would be the most effective point. If connections were fitted into each branch of the manifold, a pair of cylinders could be treated at a time and the action more closely noted, and there would be less danger of stalling the engine. These same connections could be used to good advantage for the admission of vapor or steam, although satisfactory results have been obtained from but one connection before the manifold branches.

Washing out the engine with water has certain disadvantages if not properly done and precautions taken to safeguard the lubricating oil. Cold water should not be admitted to a hot engine. It has been done without disastrous results, but it was more good luck than good management. You all know what a pail of cold water will do to a red hot stove, and there is no assurance that the unequal contraction will not crack or warp the cast iron of the engine just as it did that of the stove. Use boiling water and there will be no danger from that source. The water will become so heated by contact with the hot gases that by the time it reaches the combustion chamber it will very easily vaporize. After the water treatment the engine must be run for some time without load to blow out the carbon and restore the oil film which may have been washed away with the carbon. Immediately after washing out an engine with water the crank case oil should be drained and new oil supplied. This treatment should not be necessary oftener than at the end of the run of a filling of oil.

Before admitting steam or water vapor the engine should be run for at least fifteen minutes in order to warm up well, and the generating device should be shut off the same length of time before stopping in order to allow the cylinders to thoroughly dry.

Any method of removing carbon without dismantling the engine has its drawback in particles of carbon getting under the valves, causing pitting and leaky valves, unless the valves are reground after each treatment. Oxygen burning is the one possible exception.

If you would have a clean, smooth running engine, free from carbon deposits, put the engine in good mechanical condition and maintain that condition, and admit steam or water vapor with the fuel mixture.

W. B. M., Newburgh, N. Y.

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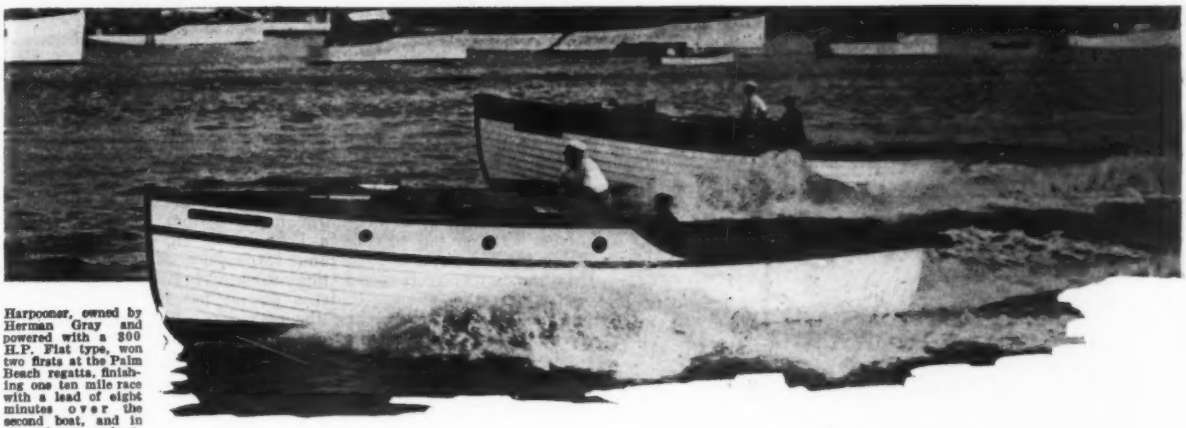
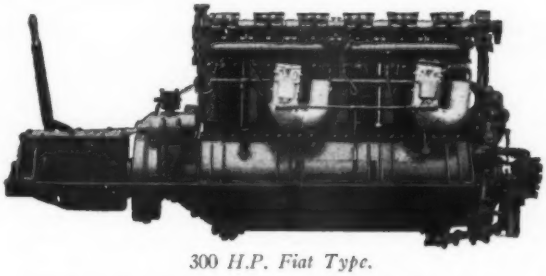


Harpooner, owned by Herman Gray and powered with a 300 H.P. Fiat type, won two firsts at the Palm Beach regatta, finishing one ten mile race with a lead of eight minutes over the second boat, and in the other race beating a 400 H.P. boat by four minutes in ten miles.

Detroit Marine-Aero

(Fiat Type)—300 H. P.



300 H.P. Fiat Type.

The price of this motor is $3000 f.o.b. Detroit

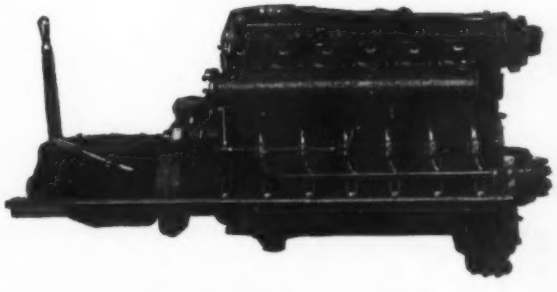
THE best buy in the 300 H.P. class because it is a high grade, high speed engine, properly adapted for marine work, and remarkably low in price for an engine of its size and quality. Built to endure continuous service in speed runabouts and fast cruisers.

The 300 H.P. Fiat type engines have proven their worth as power units for heavy sea fishing boats used at Palm Beach and Miami. At present, there are more than 100 in use on the Atlantic seaboard. In fact, the 300 H.P. Fiat type motor for marine use has supplanted many other competitors for honors in the field. Performance has been the chief reason.

Gar Wood-Marine

400 H. P. 500 H. P.

TODAY sees the Gar Wood Marine Engine a leader in its field. Its extreme popularity with Eastern yachtsmen has been accomplished only through its adaptability to use under the most trying conditions. Whether it is the 400 H.P. or the super powered 500 H.P. engine, the satisfaction of the owner remains the same. Its use has become widespread in fast runabouts and cruisers on salt water along the Atlantic seaboard from Maine to Florida.



Type T25 400 H.P at 1700 R.P.M.

Detroit Marine-Aero Engine Co. Gar Wood, Inc.

409 Connecticut Ave., Detroit, Mich.

Eastern Distributors and Service
SEXTON MOTOR COMPANY
149 Washington Street,
New York City

Chicago Distributors
HUBBARD H. ERICKSON & CO.
3037 N. Western Ave.,
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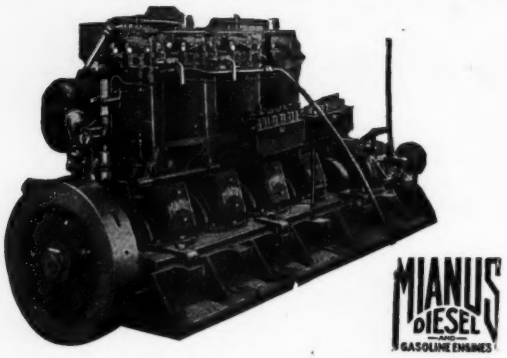
MIANUS

Diesel and Gasoline Engines



For Main and Auxiliary Power

Diesel Engines, 7½ to 100 B.H.P.

Gasoline Engines, 2 Cycle, 3 to 15 H.P.
4 Cycle, 25 to 40 H.P.

Write for detailed information.

MIANUS DIESEL ENGINE CO.
GENERAL OFFICE, 165 BROADWAY, NEW YORK

BRANCHES:
New York; Los Angeles, Cal.; Boston, Mass.; Baltimore, Md.; Norfolk, Va.

AGENTS:
Eclipse Engineering Co., New Orleans, La.; F. W. Backus, Miami, Fla.; Pieper Sons, Charleston, S. C.

The Dunphy "Sand-Dab" sells at a very attractive price consistent with quality. Write for illustrated catalog which contains specifications, prices and complete information on row-boats, outboard motor boats, canoes, etc. Yours upon request.

Dunphy Boat Mfg. Co.
Dept. C8
EAU CLAIRE, WIS.

Dunphy Sand-Dab

Famous for speed, power and sturdiness. Length 18 feet. Four-cycle Universal Motor placed amidship. Makes 12 miles an hour easily. Auto steering wheel. Plenty of room for eight. Beaches anywhere—the propeller is protected. Runs in 10 inches of water. Made only by Dunphy, the company that has been "famous for boats for forty years."

DUNPHY
"famous for boats for forty years!"

LOBEE CIRCULATING & BILGE PUMP

You can't get a better or more reliable pump than the Lobee because there isn't a better one made. It has been the World's Standard of Pump Quality for 25 years. No other pump has proven so popular in the marine trade.

Simple, compact, noiseless and positive. These pumps will outwear the engines to which they are attached.

Gear and Rotary Pumps from ⅜" to 1½" suction and discharge. Different designs for various types of drive and mounting made to order.

Write today for catalog and prices
Sold by Leading Dealers Everywhere

Lobee Pump & Machinery Co.
1790 Niagara Street, Buffalo, N. Y., U. S. A.

Loosening Obstinate Studs

(*Continued from page 42*)

cut backwards or forge a left hand drill from a piece of steel. Use all the pressure the drill will stand and in most cases the broken portion will back out before the drill goes through the bottom. The heat from the friction of drilling and the backing out direction of the cutting generally does it. Where it is possible to drill from the opposite side a right hand drill should be used. Rust solvent is often beneficial in this connection. After the screw is drilled through the bottom, put in a little solvent and on top of that a little heavy oil. Insert a free fitting pin and strike a sharp blow, forcing the solvent up around the threads and at the same time causing considerable pressure to bear on the screw. Insert a square punch in the drilled hole and after firmly setting the punch, use the wrench on it. As a last resort, drill to just clear the threads and cut away the shell with a tap. This requires careful work, but it can be done without spoiling the threads in the tapping. Practically the same removal methods apply to broken lag screws.

Should the threads become so damaged that it is not practical to use the same size screw, tap for the next size. Where taps and adjustable dies are available, it is possible to make the tap cut a little larger than its size by placing a taper pin or a nail in the flute between the cutting edges of the tap and cutting with only one side of the tap. It will then be necessary to make a new screw to fit the enlarged tapping. Where it is desirable to use the same size screw and there is sufficient metal for a bushing, drill and tap for a larger screw, which is cut off flush and tapped the original size. Dip the larger screw in, and wash the tapping with a saturated solution of sal-ammoniac and set up to the limit, then cut off and tap. In a few days the sal-ammoniac will make a rust joint that will never let go or leak.

Drilling out a lag screw is a tedious operation, but it sometimes must be done, and the hole in the wood will be enlarged so that another screw of the same size cannot be used. Why use a lag screw when the repair will be stronger than the original? After removing the old lag screw, bore the wood for a distance of from six to eight inches and cut in from the side so that a nut can be put on the bolt when inserted in the boring. Make the bolt with both ends threaded and use a nut on each end. Jam nuts on one end to turn with, place a nut and washer in the mortise, insert the bolt and catch the nut by turning the bolt. Then punch or batter up the threads so that the nut will not work off, and plug the mortise.

When setting up on any machine screw thread, breaking will result if turned beyond the point where the screw springs when the strain is applied to the wrench. Remember to grease all threads for the two reasons stated above, and when tightening up on a series of nuts or cap screws, set them all up snug first and then go around a couple of times, taking up a little more each time until they are as tight as is practical.

W. B. M., Newburgh, N. Y.

Governor for Gas Engines

Of interest is the announcement by the Eisemann Magneto Corporation that arrangements have been completed for the acquisition of the automotive business of the Duplex Engine Governor Company.

The entire stock of raw and finished materials, special machinery and facilities for manufacture have been transferred to the Eisemann plant, and it is expected that but a slight interruption in production will occur.

Both the well-known Simplex and Duplex models will be continued. Production is being organized and plans made for marketing a new developed Mercury Turbine Governor very soon.

William N. Shaw, President of the Eisemann Company, said: 'The day of the governor is here. The safety of human lives demands its use. Already, a number of States have enacted laws making obligatory the installation of governors on motor trucks traversing the public highways, and it is very probable other states will adopt similar measures to combat the appalling increase in death rates. Such legislation not only meets the approval of, but, in many instances, is sponsored by the various States Highway Departments. Heavily laden trucks running at high speeds exert a disastrous effect on improved roads. The insurance companies are taking a vital interest in the growing use of governors, and without doubt collision and public liability policies will soon carry a premium reduction where governors of approved types are used."

The Eisemann Company with its widespread service facilities is well equipped to handle this new business.

Advertising Index will be found on page 166

Here Is Why Gray Motors Excel

THE rugged toughness and unexcelled performance of the Gray Model "Z" springs from a craftsmanship that is inborn, an experience that comes with years and the keen ability of engineering brains.

Behind this Gray Model "Z" stands a background of 30 good, sound, solid years of engineering practice, and the same number of years spent in perfecting, designing and advancing—all towards the final results of a perfected product at a popular price. This, plus the fact that Gray Motors have been "Good Since 1906" giving unequalled, unsurpassed satisfaction in every waterway throughout the world are the reasons for the leadership of the Gray Model "Z."

When you want a motor that gives the performance of higher priced engines—a motor that is the shortest, cleanest, highest grade engine in its power class, there is but *one* motor on the market—and that is—the Gray Model "Z."

This engine is also the lightest in its power class, but where weight is not a consideration, it can be furnished with an iron base.

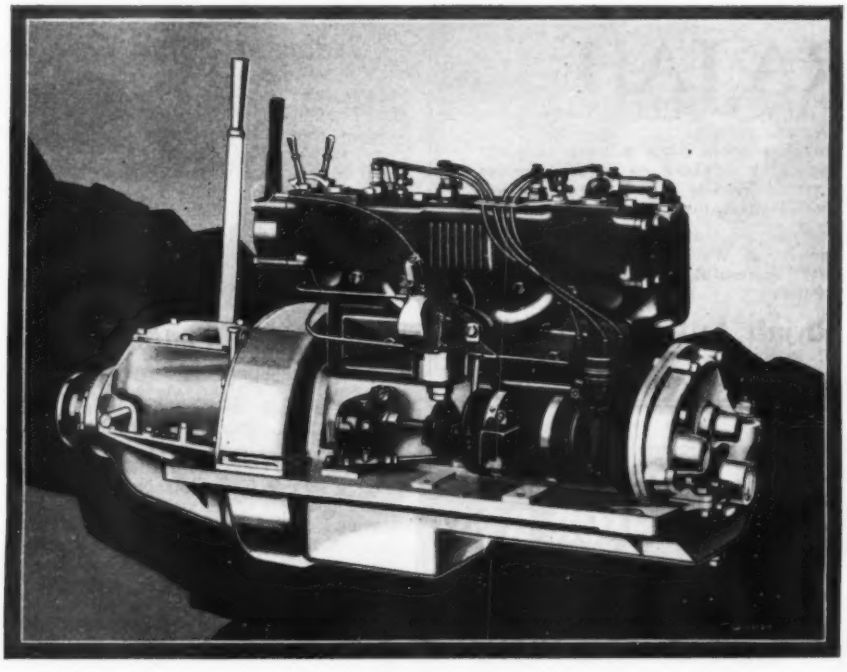
Deliveries

Because of our manufacturing methods and a supply of engines kept ready for immediate shipment, orders for quick deliveries can be filled in all parts of the country.

Write for These Gray Catalogues

Model "Z," 14-22 H.P.....$295.00 to $466.00
Model "VE," 35-40 H.P. heavy duty.....$600.00
Model "O," 4-cycle, 5 H.P..... $99.00 to $135.00
Model "V," 25-35 H.P.....$460.00 to $720.00
Model "U," double cylinder, 2 cycle, 6-8 H.P.

GRAY MARINE MOTOR COMPANY
6910 Lafayette Avenue, East at Canton, Detroit, Mich.



Gray Motors

Everybody's RUNABOUT and LAUNCH

Our 20-ft. runabout and launch gives you more value per dollar than many motor boats at double its price. Large seating capacity.

20-Ft. Runabout

Powered with Ford motor, Bar-Ford equipped with electric starter and generator	$895
Powered with International motor, with reverse gear and rear starter	955
Powered with ZB Gray motor, Bosch magneto and impulse starter, with reverse gear and rear starter	1,080
Our special runabout is powered with a 14-30 H.P. Buffalo motor, mahogany trim, brass fittings. Speed, 18 miles.	1,345

20-Ft. Launch

Powered with Ford motor, Bar-Ford equipped	$750
Powered with International motor, with reverse gear and rear starter	875
Powered with ZB Gray motor, Bosch magneto and impulse starter, with reverse gear and rear starter	1,000

The above prices are for delivery in the water at our yard. If to be crated F.O.B. Mamaroneck, add $30.

These stock boats are exceptional values.

10-ft. lap-strake rowing tenders	$150
16-ft. x 6-ft. stock launch	600
14-ft. sailboat	175

Write for descriptive literature.
Let us quote on your custom work.

Boat Department

SOUND MACHINE SHOP, Inc.

MAMARONECK, NEW YORK

RAJAH SPARK PLUGS

It takes more than an exceptionally good plug to stand up in hard marine service. That is why Rajah is the unrivaled spark plug for marine use.

For unprotected engines in open boats use Rajah Waterproof type plug—the only successful waterproof plug designed.

Rajah Auto Supply Co.
Bloomfield, New Jersey, U. S. A.

Leading Marine Dealers carry Rajah Spark Plugs and Terminals.

TOPPAN OUTBOARD MOTOR BOAT

Send for Details of Our Combination Price with the Powerful 3 H.P.

ELTO MOTOR

Toppan Boat & Engine Co., Medford, Mass. Builders of the popular **"SEA DOG"** 22 ft. 25 mile double cockpit runabout; the famous "TOPPAN 22 ft. **POWER DORY LAUNCH"**; the **"TOPPAN TOT"** 15 ft. marconi cat sail boat. Also dory type rowing skiffs and yacht tenders in stock.

a safe and fast Sea Skiff

Miami One Design Boats

(*Continued from page* 156)

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Evinrude Stunt Draws Comment

A novel merchandising stunt, in the form of a motor truck display, was used to excellent effect recently by a Milwaukee Evinrude dealer, with the co-operation of the factory.

They conceived the idea of mounting a boat and motor on a truck and keeping it running over a city and county route. This idea proved an excellent way of stimulating sales during the height of the summer. An Evinrude boat, equipped with a Sport Twin was mounted on a realistic water-effect support, and the whole installed on a truck. This display truck was kept going through the busiest sections of the city during the noon hour, and traveled the county highways during the afternoons. Naturally, it excited a good deal of comment, and resulted in some added business at trifling cost.

Quick Deliveries to Florida

L. O. Blatchford, Elco agent at Miami, Florida, recently ordered for a customer a 45-ft. Elco Cruiser, the order being dependent upon delivery in Miami during the week ending January 10th. Mr. Blatchford's formal order was received at the Elco works on January 2nd and the boat was immediately prepared for shipment via the Transmarine Lines, operating weekly service from Port Newark, N. J., to Gulf ports. The motor boat was delivered alongside the Sujerseyco of the Transmarine Lines on Friday, January 5th, the vessel sailing the next day, on Saturday. The motor boat was loaded on deck, with everything in place, including the awning. The vessel proceeded to sea and arrived off Miami Harbor on January 9th, when ship was stopped and with the cargo tackle, the 45-ft. Elco Cruiser was loaded into the water very successfully, where it was met by Mr. Blatchford and under its own power proceeded into Miami Harbor, and it was delivered to A. B. Prettyman of Daytona, Florida. This is the second delivery this winter made by Elco in Florida waters via the Transmarine Lines, which steamship company is the subsidiary of the Submarine Boat Corporation of which the Elco works is the motor boat department. Never before have motor boats been delivered along the seacoast from decks of cargo ships at sea, but on these two occasions, satisfactory delivery was accomplished in record time and at much less expense than if shipped by rail or run on their own power to Florida waters.

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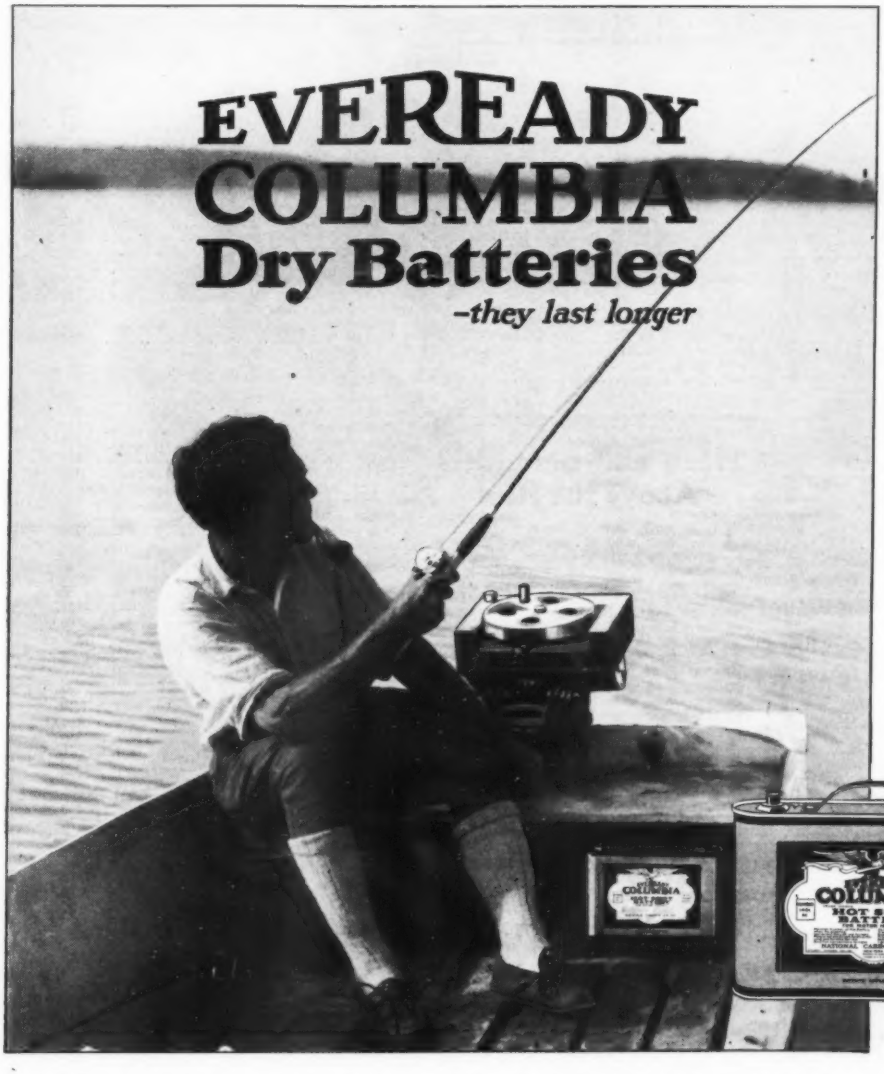
Loafing, they regain their strength



Popular uses include—

- motor boat ignition
- gas engine ignition
- tractor ignition
- starting Fords
- doorbells
- buzzers
- ringing burglar alarms
- calling Pullman porters
- running toys
- telephone and telegraph
- lighting tents and outbuildings
- firing blasts
- heat regulators
- electric clocks
- radio "A"

Eveready Columbia Hot Shot Batteries contain 4, 5 or 6 cells in a neat, waterproof steel case.

The supreme radio dry cell "A" Battery for all dry cell tubes.

WHEN all's quiet except for the sing of the reel, and the ker-plop of the plug as you try out the edge of the reeds, the Eveready Columbia Hot Shot that fires your engine is not only resting—*it is renewing its strength.* When you're ready to start, Eveready is ready to deluge your engine with a bunch of hard-hitting sparks. By resting and recuperating when not working, these batteries last longer. Thousands of men tell us that under average use their Hot Shots last the season through. For sure-fire starting and never-miss running, insist on the Eveready Columbia Hot Shot—they last longer.

Don't just ask for "a dry cell." Ask for Eveready Columbia Dry Batteries by name and get 100% battery efficiency. Eveready Columbia Dry Batteries are sold by marine supply dealers, electrical, hardware and auto accessory shops, radio and implement dealers, garages and general stores. Eveready Columbia Ignitors can be purchased equipped with Fahnestock spring clip binding posts at no extra cost to you.

Manufactured and guaranteed by

NATIONAL CARBON COMPANY, INC., New York—San Francisco

Canadian National Carbon Co., Limited, Toronto, Ontario

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Head and Shoulders Above the Rest

IT is only natural that marine advertisers should use their largest space in MoToR BoatinG when you consider that MoToR BoatinG is in every way the leading publication in the field. Its circulation far exceeds that of any boating magazine and is of the highest quality. It is publishing more than twice the volume of advertising per issue that appears in its nearest competitor.

A manufacturer* recently advised us he received business to the extent of $35,000 in response to his advertisement appearing in two issues of MoToR BoatinG (at an advertising cost of less than 1¼ per cent). This advertiser goes on to say, "MoToR BoatinG stands head and shoulders above all the rest."

If you have something to sell boatmen, advertise it in

MOTOR BOATING

119 WEST 40TH STREET
NEW YORK

*Name furnished upon request.

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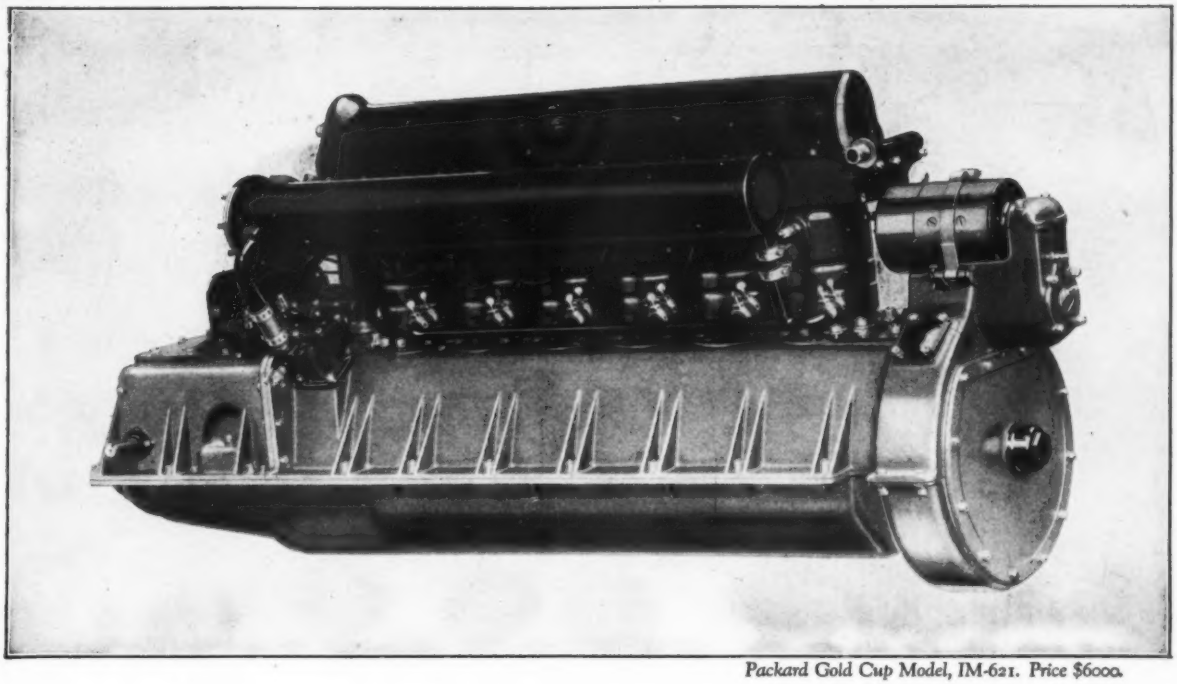

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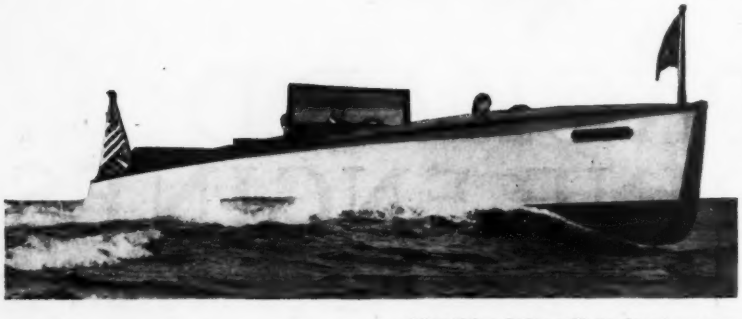

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